TAR-PAMLICO RIVER BASIN REGIONAL COUNCIL

Western Sizzlin' Restaurant
Hwy. 301 Business
Rocky Mount, NC

December 6, 1999

AGENDA

10:00am	Welcome & Call to Order	Vice Chairman Paul Blount
10:05	Roll Call	Joan Giordano
10:15	Acceptance of Minutes	Vice Chairman Blount
10:20	Discussion: Hurricane Floyd & Aftermath	All
10:45	Overview of Proposed Tar-Pamlico Rules Questions & Answers	Rich Gannon NC Division of Water Quality
11:45	Formation of Nominating Committee for Election of Officers	Vice Chairman Blount
12:00	Appointment of Tar-Pamlico Coordinating Council Representatives	Vice Chairman Blount
12:15	Old Business	Vice Chairman Blount
12:30	New Business, Public Comment, Plans for Next Meeting	Vice Chairman Blount
12:45	Adjourn & Lunch	

Nom. Comm.
M.G. Jennings
Grey

Mail c Minutes
- By-laws
- agenda

Feb 25th

Tar-Pamlico River Basin Regional Council
Western Sizzlin Restaurant
Rocky Mount, North Carolina

December 6, 1999

Minutes

This meeting was a result of the need to reschedule the meeting set for September 17 due to the hurricanes and flooding in eastern North Carolina.

Vice-Chair Paul Blount called the meeting to order at 10:15 a.m. Joan Giordano called the roll, and then self-introductions were made. There were nine members present plus three Division of Water Quality staff. A list of those in attendance is attached. A motion was made to accept the minutes from the July 30, 1999 meeting in Louisburg, seconded and passed.

The opening portion of the meeting was a discussion of the flooding in eastern North Carolina from the hurricanes. Each member had the opportunity to relate experiences and information from their own part of the river basin.

Next, Rich Gannon of the DWQ gave an overview of the proposed Tar-Pamlico nutrient rules. Because of the hurricanes, implementation of the urban stormwater, nutrient management, and agriculture rules will be delayed until August, 2001. The buffer rules will probably be passed as temporary rules during the December 9, 1999 EMC meeting. Mr. Gannon discussed the public hearings that were held on the rules, and outlined some of the common comments and some of the proposed changes to the rules based on the comments. If passed by the EMC, the temporary buffer rules will be effective in January, and the permanent rules in August.

Next a nominating committee was formed to develop a list of candidates for officers for the next year. The committee will include Mary Jane Jennings, Guy Stefanski, and Joan Giordano.

Appointments were then made to the Coordinating Council. Tar-Pamlico members appointed were Joe Shearon (municipal), Cheryl Byrd (county) and Mary Jane Jennings (interest group).

In old business, a status update of our two demonstration projects was given by Guy Stefanski. He said that both projects are nearing the approval to issue contracts, probably around the first of the year.

Switching to new business, Joan Giordano said that the executive order forming this council, the bylaws, and an updated membership roster will be sent with the minutes from this meeting. She also reiterated that the basic responsibility of members is to periodically report to their city or county, probably through the city or county manager.

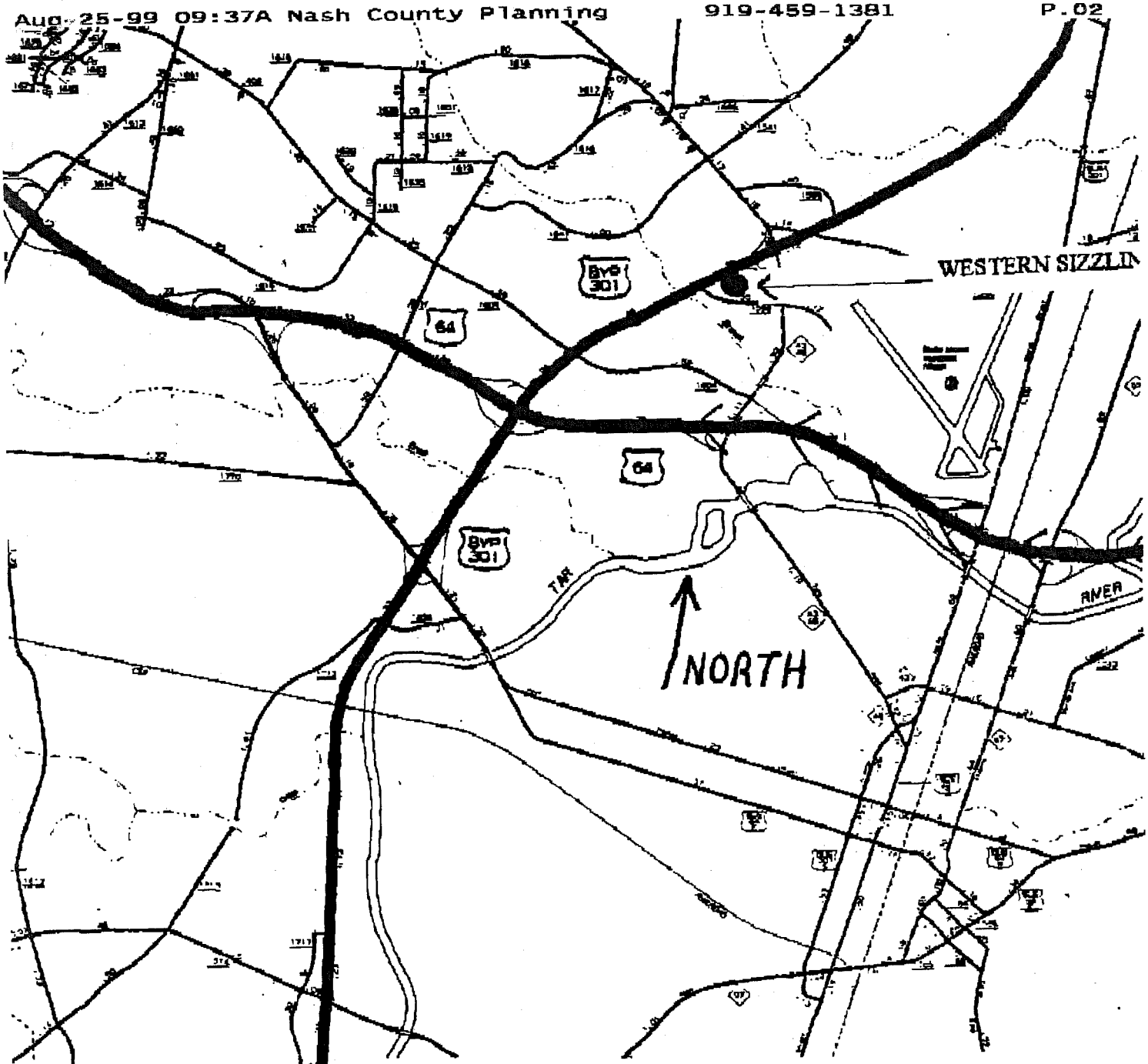
The next meeting was set for February 25, 2000, in a location to be chosen by Joan. The meeting was adjourned at 1:30 p.m.

TAR-PAMLICO REGIONAL COUNCIL MEETING

December 6, 1999
Rocky Mount, NC

ATTENDANCE

Jeff Peed	Beaufort Co. Municipal Rep.
John Ball	Franklin Co. County Rep
Joe Shearon	Franklin Co. Municipal Rep.
Mary Jane Jennings	Franklin Co. Conservation Rep.
Jason Falls	Granville Co. County Rep.
Gwen Newman	Hyde Co. Municipal Rep.
Larry Odom	Nash Co. County Rep.
Paul Blount	Nash Co. Municipal Rep.
Jeff Furness	Business/Industry Rep.
Dan Wynne (Excused)	Pitt Co. County Rep.
Cheryl Byrd (Excused)	Dare Co. County Rep.
Joan Giordano	APNEP/DWQ Staff
Guy Stefanski	APNEP/DWQ Staff
Rich Gannon	DWQ Staff



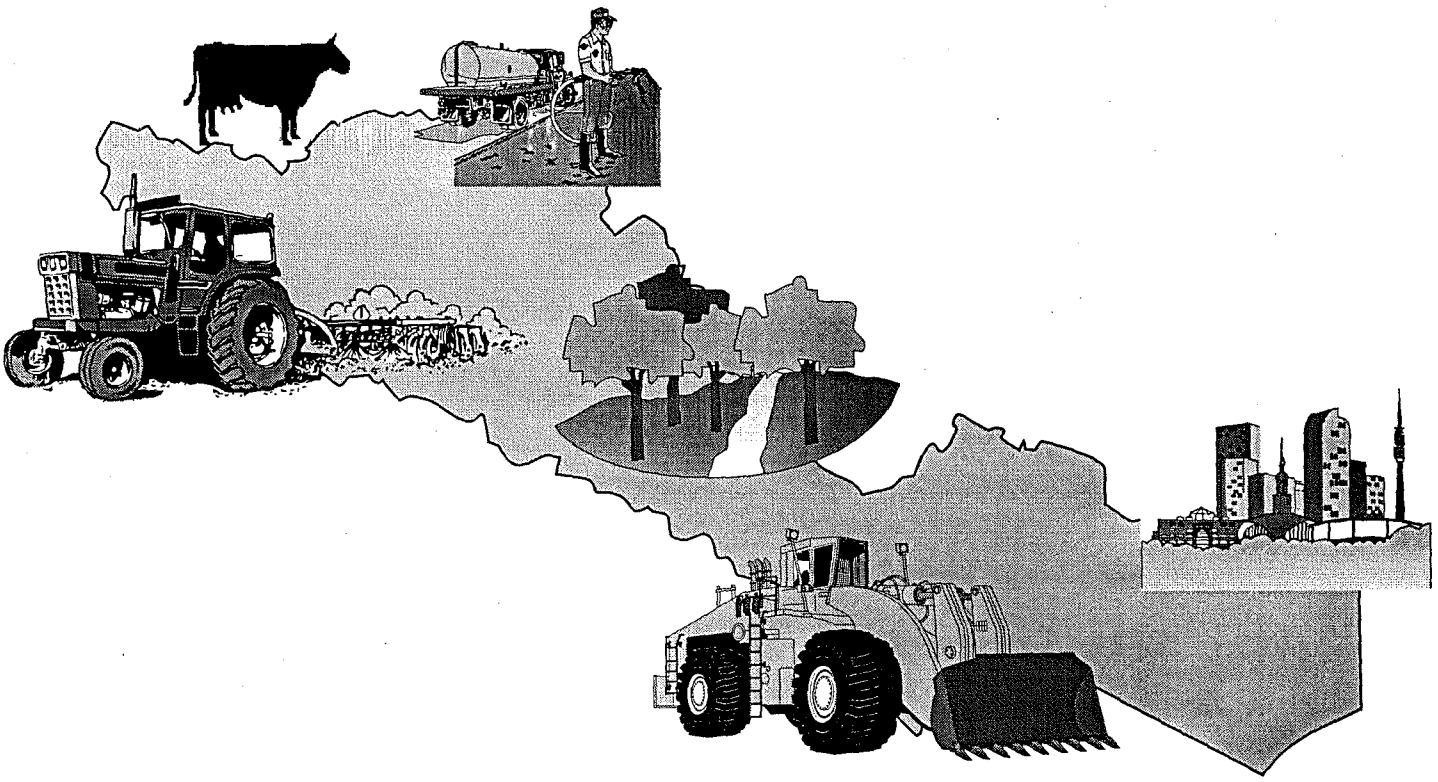
WESTERN SIZZLIN STEAK HOUSE HWY 301 NORTH.

FROM EAST OF ROCKY MOUNT, TAKE U.S. 64 BY PASS WEST TO ROCKY MOUNT AND TAKE THE 301 BY PASS EXIT. AT THE STOP LIGHT TURN RIGHT ONTO 301. THE WESTERN SIZZLIN WILL BE ON THE RIGHT JUST PAST THE STOP LIGHT AT THE WAL MART.

FROM WEST OF ROCKY MOUNT, TAKE U.S. 64 BY PASS EAST TO ROCKY MOUNT AND TAKE THE 301 BY PASS EXIT. AT THE STOP LIGHT, TURN LEFT ONTO 301. THE WESTERN SIZZLIN WILL BE ON THE RIGHT JUST PAST THE STOP LIGHT AT THE WAL MART.

Tar-Pamlico River Basin

Proposed Text of Rules



Nutrient Sensitive Waters Management Plan for Nonpoint Sources

August 1999
NC Division of Water Quality

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INTRODUCTION

The Issue

The Pamlico River estuary has had a history of nutrient-related water quality problems as evidenced by excessive algal blooms, low dissolved oxygen, and fish kills. To curb these problems, the state is proposing new rules that are intended to reduce the levels of nutrients entering the river.

Actions Before Now

In 1989, the North Carolina Environmental Management Commission (EMC) designated the Tar-Pamlico River basin as "Nutrient Sensitive Waters". The EMC initially adopted a strategy that required nutrient reductions from point sources, such as wastewater treatment plants. It addressed nonpoint, or runoff-related, pollution sources voluntarily through the state's agriculture cost share program. In 1994, the EMC adopted "Phase II" of the nutrient strategy. Phase II established overall goals of a 30 percent reduction in nitrogen inputs and holding of phosphorus loads at 1991 levels. At that time, the EMC expanded the strategy to include all nonpoint source categories, such as agriculture, urban stormwater, forestry, on-site wastewater, and others, but kept all new actions voluntary.

Point sources were addressed in Phase II, which continues through 2004, with new nutrient loading caps for an association of dischargers. In each year of Phase II, as in Phase I, the association must make payments for any exceedences of its annual loading caps. These offset payments will be used for agricultural Best Management Practices that reduce nutrient loading to the basin.

Nonpoint Source Rule-making Actions

In September 1998, after two years of implementing the voluntary nonpoint source approach, the EMC determined that progress was insufficient and that mandatory nonpoint measures were needed to reach the nutrient goals. A rule-making process began in November 1998, when the Division of Water Quality (DWQ) convened 7 stakeholder teams intensively over 4 months to develop rule concepts and language. The make-up of stakeholder teams was intended to provide representation from all affected interests and the process was intended to allow differing interests to work toward mutually acceptable solutions. Meetings operated on a consensus basis and were managed by professional facilitators. DWQ staff's role was that of a stakeholder with equal authority to all other stakeholders.

In April and May 1999, the EMC accepted almost all of the stakeholder teams' recommendations. The EMC voted to proceed with formal public input on all of the draft rules the teams provided, and on the subject of atmospheric emissions of ammonia. Also included were riparian buffer protection rules developed by a stakeholder team that was mandated by the General Assembly to resolve buffer rule language for the Neuse River Basin. An initial public comment period on these rule subjects ran from June 1 to July 30, 1999.

Public Hearings

The Division of Water Quality has scheduled two public hearings on proposed nonpoint source rules in four subject areas: agriculture, nutrient management (both agricultural and non-agricultural fertilizer application), riparian buffer protection, and urban stormwater. The EMC may consider developing rules for atmospheric ammonia emissions at a later date. At the upcoming hearings, Division of Water Quality staff will provide a history and explanation of the rules and answer questions. The public will have opportunity to provide oral or written comments. Hearings have been set for the following dates and places:

Tuesday, August 31, 7:00 pm Greenville, NC Pitt County Agriculture Extension Auditorium Pitt County Extension Center 403 Government Circle On Old Creek Rd. on the north side of S.R. 33 east of U.S. 13	Thursday, September 2, 7:00 pm Nashville, NC Nash County Agriculture Center Auditorium Ag Center Drive On the north side of U.S. 64 Business (Eastern Ave.) Nash County Extension office: 252-459-9810

Submitting Comments

In addition to the hearings, a 60-day public comment period is now open on the draft text of these rules. You can provide comments to the Division of Water Quality **until September 30, 1999**. Anyone who is potentially affected by the proposals is encouraged to attend the hearings and/or provide comments by mail.

Please submit comments to: Rich Gannon DENR, Division of Water Quality Planning Branch 1617 Mail Service Center Raleigh, NC 27699-1617	***Questions?*** You can direct questions about the proposed rules to Rich Gannon at (919) 733-5083 ext. 356, or rich.gannon@ncmail.net.

Further Information

The remainder of this document provides the full text of the draft rules. DWQ staff has also prepared other information to clarify the content of the rules and the rule-making process. The following documents are available:

- Rule Summaries: One-page summaries of each of the proposed rule subjects, 4 total (4 pages).
- Q&A: Frequently asked questions about the proposed Tar-Pamlico rules, and responses from DWQ staff (3 pages).
- Participating in the Rule-making Process: Information on the hearings and how your verbal or written comments will be included in the rule completion process (1 page).
- Fiscal Analysis: A detailed analysis of the fiscal impacts of the proposed rules on all affected sectors (194 pages).

Here are some options for obtaining this information:

- If you have internet access, you can find this information in the Tar-Pamlico NSW Strategy pages of DWQ's web site, at http://h2o.enr.state.nc.us/nps/tarp.htm.
- If you would like to receive materials by US mail, please contact Marsha Byrd at 919-733-5083 ext. 558.
- You can also find the official Notice of Text of the rules and comment procedures in the August 2nd edition of the NC Register (Volume 14, Number 3), which is provided to each county and municipality in the state.

PROPOSED TEXT OF RULES

AGRICULTURE

15A NCAC 2B .0255 is proposed for adoption as follows:

.0255 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: AGRICULTURAL NUTRIENT LOADING GOALS

All persons engaging in agricultural operations in the Tar-Pamlico River Basin, including those related to crops, horticulture, livestock, and poultry, shall collectively achieve and maintain certain nutrient loading levels. A management strategy to achieve this reduction is specified in Rule .0256 of this Rule. These Rules apply to all livestock and poultry operations, regardless of size, in the Tar-Pamlico River Basin, in addition to requirements set forth in general permits for animal operations issued pursuant to G.S. 143-215.10C. The nutrient loading goals to be met by all persons specified here are as follows:

(1) a 30 percent total nitrogen net loading reduction from 1991 loading from agriculture to the basin; and

(2) no net increase in total phosphorus loading over 1991 levels.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

15A NCAC 2B .0256 is proposed for adoption as follows:

.0256 TAR-PAMLICO RIVER BASIN-NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: AGRICULTURAL NUTRIENT CONTROL STRATEGY

(a) PURPOSE. The purpose of this Rule is to set forth a process by which agricultural operations in the Tar-Pamlico River Basin will collectively achieve and maintain a 30 percent reduction in nitrogen loading to the Pamlico estuary from agricultural activities. This reduction is to be achieved within five years of the effective date of this Rule, and is to be measured from 1991 loading levels. The purpose of this Rule is also for agricultural operations to hold phosphorus loading from agricultural activities to 1991 levels within five years. The Commission acknowledges that the requirements of this Rule do not fully address nitrogen loading from animal operations, including atmospheric emissions and deposition of ammonia compounds. As information becomes available on nitrogen loading from animal operations and BMPs to control this loading, the Commission may require such BMPs it deems necessary to support the purpose of this Rule.

(b) APPLICABILITY. This Rule shall apply to all persons engaging in agricultural operations in the Tar-Pamlico River Basin. Agricultural operations are activities that relate to the production of crops, horticultural products, livestock, and poultry.

(c) OPTIONS FOR MEETING RULE REQUIREMENTS. Persons subject to this Rule are provided with two options for meeting the requirements of this Rule. Such persons shall be responsible for implementing and maintaining the BMPs selected per Paragraph (e) or (f) for as long as they continue their agricultural operation.

(1) Option 1 is to sign up for and participate in implementing a collective local strategy for agricultural nutrient control pursuant to Paragraph (e) of this Rule. This option allows site-specific plans to be developed for those operations where further nitrogen and phosphorus reduction practices are necessary to achieve the collective loads.

(2) Option 2 is to implement standard BMPs pursuant to Paragraph (f) of this Rule. Requirements for the BMPs are listed in Paragraphs (g) through (k) of this Rule.

(d) METHOD FOR RULE IMPLEMENTATION. This Rule shall be implemented through a cooperative effort between the Basin Oversight Committee and Local Advisory Committees in each county or watershed. The membership, roles and responsibilities of these committees are set forth in Paragraphs (l) and (m) of this Rule.

(e) OPTION 1: PARTICIPATE IN A COLLECTIVE LOCAL STRATEGY FOR AGRICULTURAL NUTRIENT CONTROL. Persons who choose to participate in the collective local strategy for agricultural nutrient control shall meet the following requirements.

(1) Within one year of the effective date of the Rule, persons shall sign up with the Local Advisory Committee for their county or watershed to participate in the collective local strategy. Persons who do not complete the sign-up process shall be subject to Option 2 set forth in Paragraph (f) of this Rule.

(2) Persons who choose this option shall sign a plan developed for their operation that is satisfactory to their Local Advisory Committee per the requirements set forth in Subparagraph (m)(3).

(3) A person may withdraw from the local nutrient control strategy up until the time that the person signs a plan for his operation as described in Subparagraph (e)(2) above. Persons who do not sign the plan shall be subject to Option 2 pursuant to Paragraph (f) of this Rule.

(4) Persons who sign the plan for their operation shall be required to implement the plan within five years after the effective date of this Rule and to permanently maintain the BMPs specified in the plan for as long as the agricultural operation continues.

(5) Persons who implement a nutrient management plan as part of Option 1 shall have satisfied the requirements of the Tar-Pamlico Nutrient Management Rule, 15A NCAC 2B .0257.

(f) OPTION 2: IMPLEMENT STANDARD BEST MANAGEMENT PRACTICES (BMPs). Option 2 shall apply to the following persons: persons who choose to follow this option, persons who do not complete the sign-up process for Option 1 within one year of the effective date of this Rule, and persons who sign up for Option 1 but withdraw prior to signing the specific plan for their operation. The requirements associated with Option 2 are as follows.

(1) Persons subject to Option 2 shall implement one of the following BMP combinations on all lands within their operation within four years of the effective date of this Rule:

(A) A 30-foot forested riparian area meeting the requirements of Paragraphs (g) and (h) and a 20-foot vegetated riparian area meeting the requirements of Paragraphs (g) and (i); or

(B) A 30-foot vegetated riparian area meeting the requirements of Paragraphs (g) and (i) and either water control structures meeting the requirements of Paragraph (j) or a nutrient management plan meeting the requirements of Paragraph (k); or

(C) A 20-foot forested riparian area meeting the requirements of Paragraphs (g) and (h) and either water control structures meeting the requirements of Paragraph (j) or a nutrient management plan meeting the requirements of Paragraph (k); or

(D) Water control structures meeting the requirements of Paragraph (j) and a nutrient management plan meeting the requirements of Paragraph (k).

(g) REQUIREMENTS FOR FORESTED AND VEGETATED RIPARIAN AREAS. Forested and vegetated riparian areas implemented under either Option 1 or Option 2 shall meet the following requirements.

(1) Sheet flow must be maintained to the maximum extent practical through dispersal of concentrated flow and re-establishment of vegetation to maintain the effectiveness of the riparian area.

(2) Concentrated runoff from new ditches or manmade conveyances must be dispersed into sheet flow before the runoff enters any riparian area.

(3) Periodic corrective action to restore sheet flow should be taken by the landowner if necessary to impede the formation of erosion gullies that allow concentrated flow to bypass treatment in the riparian area.

(4) A vegetated riparian area may be substituted for an equivalent width of forested riparian area within 100 feet of tile drainage.

(5) Where the riparian area requirements would result in an unavoidable loss of tobacco allotments [(7 CFR 723.220(c)] and the BMPs of controlled drainage or nutrient management are not in place, forest cover is required only in the first 20 feet of the riparian area.

(6) The following practices and activities are not allowed in either the forested riparian area or the vegetated riparian area:

(A) Any activities that would result in water quality standard violations or disrupt the structural or functional integrity of the riparian areas.

(B) Land disturbing activity and placement of fill and other materials, other than that necessary under Paragraph (h) of this Rule.

(C) Any activity that threatens the health and function of the vegetation including, but not limited to, application of fertilizer or chemicals in amounts exceeding the manufacturer's recommended rate, uncontrolled sediment sources on adjacent lands, and the creation of any areas with bare soil.

(7) The following waterbodies and land uses are exempt from the riparian area requirements of this Rule:

(A) Ditches and manmade conveyances, other than modified natural streams, which under normal conditions do not receive drainage waters from any tributary ditches, canals, or streams, unless the

ditch or manmade conveyance delivers runoff directly to waters classified in accordance with 15A NCAC 2B .0100.

(B) Areas mapped as perennial streams, intermittent streams, lakes, ponds or estuaries on the most recent versions of United States Geological Survey 1:24,000 scale (7.5 minute quadrangle) topographic maps where no perennial or intermittent streams, lakes, ponds, or estuaries exist on the ground.

(C) Ponds and lakes created for animal watering, irrigation, or other agricultural uses that are not part of a natural drainage way that is classified in accordance with 15A NCAC 2B .0100.

(D) Water dependent structures as defined in 15A NCAC 2B .0202, provided that they are located, designed, constructed and maintained to provide maximum nutrient removal, to have the least adverse effects on aquatic life and habitat and to protect water quality.

(E) Stream restoration projects, scientific studies, stream gauging, water wells, passive recreation facilities such as boardwalks, trails, pathways, historic preservation and archaeological activities, provided that they are located, designed, constructed and maintained to provide the maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to maximum extent practical through the use of BMPs.

(F) Stream crossings associated with timber harvesting, if performed in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J .0201-.0209).

(h) SPECIFICATIONS FOR FORESTED RIPARIAN AREAS. Forested riparian areas implemented under either Option 1 or Option 2 shall meet the following specifications.

(1) Forested riparian areas shall be established on all sides of surface waters indicated as intermittent streams, perennial streams, lakes, ponds and estuaries on the most recent versions of U.S.G.S. 1:24,000 scale (7.5 minute quadrangle) topographic maps or other site-specific evidence. The surface waters shall be within the operation or adjacent to it within the distances specified in Subparagraph (f)(1) above.

(2) The forested riparian area shall begin at top of bank for intermittent streams and perennial streams without tributaries and shall extend landward the applicable distance specified in Subparagraph (f)(1) above on all sides of the waterbody, measured horizontally on a line perpendicular to the waterbody. For all other waterbodies, the forested riparian area shall begin at top of bank or mean high water line and shall extend landward the applicable distance specified in Subparagraph (f)(1) above, measured horizontally on a line perpendicular to the waterbody.

(3) Forested riparian areas shall be established as undisturbed forest. Any forest vegetation that exists on the effective date of this Rule in forested riparian areas that are established per this Rule must be preserved and maintained in accordance with Parts (h)(5)(A)-(F) below.

(4) The application of fertilizer in forested riparian areas established under this Rule is prohibited.

(5) The following practices and activities are allowed in forested riparian areas established under this Rule.

(A) Natural regeneration of forest vegetation and planting vegetation to enhance the riparian area if disturbance is minimized, provided that any plantings should primarily consist of locally native trees and shrubs.

(B) Selective cutting of trees provided that the basal area (measured as 12-inch diameter breast height) remains at or above 60 square feet per acre of riparian area. Limited mechanized equipment is allowed in this area.

(C) Horticulture practices to maintain the health of individual trees.

(D) Removal of individual trees that are in danger of causing damage to dwellings, other structures, or the stream channel.

(E) Removal of dead trees and other timber cutting techniques necessary to prevent extensive pest or disease infestation if recommended by the Director, Division of Forest Resources and approved by the Director, Division of Water Quality.

(F) Timber removal and skidding of trees, as allowed under Parts (h)(5)(A) – (h)(5)(E) shall be directed away from the water course or water body. Skidding shall be done in a manner to prevent creation of ephemeral channels perpendicular to the water body. Tree removal shall be performed in a manner that does not compromise the intended purpose of the riparian area and in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J .0201-.0209).

(i) SPECIFICATIONS FOR VEGETATED RIPARIAN AREAS. Vegetated riparian areas implemented under either Option 1 or Option 2 shall meet the following specifications.

(1) The vegetated riparian area identified in Part (f)(1)(A) shall begin at the outer edge of the forested riparian area and shall extend landward a minimum of 20 feet as measured horizontally on a line perpendicular to the waterbody. The vegetated riparian area identified in Part (f)(1)(B) shall begin at the top of bank for intermittent streams and perennial streams without tributaries and shall extend landward a minimum of 30 feet on each side of the waterbody, measured horizontally on a line perpendicular to the waterbody. For all other waterbodies, the vegetated riparian area identified in Part (f)(1)(B) shall begin at the top of bank or the mean high water line and shall extend landward 30 feet, measured horizontally on a line perpendicular to the waterbody.

(2) Vegetation in the vegetated riparian area shall consist of a dense ground cover composed of herbaceous or woody species, which provides for diffusion and infiltration of runoff and filtering of pollutants.

(3) The following practices and activities are allowed in the vegetated riparian area in addition to those allowed in the forested riparian area.

(A) Mowing and removal of plant products such as timber, nuts, and fruit on a periodic basis, provided the intended purpose of the riparian area is not compromised by harvesting, disturbance, or loss of ground cover.

(B) Management of forest vegetation to minimize shading on adjacent land, if the water quality functions of the riparian area are not compromised.

(j) REQUIREMENTS FOR WATER CONTROL STRUCTURES. Water control structures implemented under either Option 1 or Option 2 shall meet the following requirements.

(1) Water control structures shall be operated pursuant to a water control structure management plan developed according to the standards and specifications adopted by the NC Soil and Water Conservation Commission. A technical specialist designated pursuant to Rules adopted by the Soil and Water Conservation Commission must provide written approval that the water management plan meets such standards and specifications. If the water management plan is not implemented, then a riparian area is required pursuant to this Section.

(2) The water control structures must provide equivalent protection and directly affect the land and waterbodies draining into the waterbody subject to the riparian area requirements.

(3) To the maximum extent practical, water control structures should be managed to maximize nitrogen removal throughout the year.

(k) REQUIREMENTS FOR NUTRIENT MANAGEMENT PLANS. Nutrient management plans implemented under either Option 1 or Option 2 shall meet the following requirements.

(1) Nutrient management plans shall be implemented on agricultural land adjacent to riparian areas according to the standards and specifications adopted by the NC Soil and Water Conservation Commission. A technical specialist designated pursuant to Rules adopted by the Soil and Water Conservation Commission must provide written approval that the water management plan meets such standards and specifications.

(2) If the nutrient management plan is not implemented, then a riparian area is required pursuant to this Section.

(3) Nutrient management plans must provide equivalent protection and directly affect the land and waterbodies draining into the waterbody subject to the riparian area requirement.

(4) To the maximum extent practical, nutrient management plans should be managed to maximize nitrogen removal throughout the year.

(l) BASIN OVERSIGHT COMMITTEE. The Basin Oversight Committee shall have the following membership, role and responsibilities.

(1) MEMBERSHIP. The Commission shall delegate to the Secretary the responsibility of forming a Basin Oversight Committee within 2 months of the effective date of this Rule. Members shall be appointed for five-year terms and shall serve at the pleasure of the Secretary. Until such time as the Commission determines that long-term maintenance of the nutrient loads is assured, the Secretary shall either reappoint members or replace members every five years. The Secretary shall solicit one nomination for membership on this Committee to represent each of the following:

(A) Division of Soil and Water Conservation,

(B) 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),

(C) North Carolina Department of Agriculture and Consumer Services,

(D) North Carolina Cooperative Extension Service,

(E) Division of Water Quality,

(F) Environmental interests,

(G) Agricultural interests, and

(H) The scientific community with experience related to water quality problems in the Tar-Pamlico River Basin.

(2) ROLE. The Basin Oversight Committee shall:

(A) Develop a tracking and accounting methodology pursuant to Subparagraph (l)(3), and submit the final version to the Commission within one year of the effective date of this Rule.

(B) Demonstrate within 18 months of the effective date of this Rule how the nitrogen and phosphorus loads can be met by each county or watershed and collectively by implementing BMPs.

(C) Identify and implement future refinements to the accountability methodology as needed to reflect advances in scientific understanding.

(D) Appoint a technical advisory committee within 6 months of the effective date of this Rule to monitor advances in scientific understanding related to phosphorus loading, to evaluate the need for additional management action to meet the phosphorus load, and to report its findings to the Basin Oversight Committee on an annual basis. The Basin Oversight Committee shall in turn report these findings and its recommendations to the Commission on an annual basis following the effective date of this Rule, until such time as the Commission determines that the technical advisory committee has fulfilled its purpose. The Basin Oversight Committee shall solicit nominations for this committee from the Division of Soil and Water Conservation, United States Department of Agriculture-Natural Resources Conservation Service, North Carolina Department of Agriculture and Consumer Services, North Carolina Cooperative Extension Service, Division of Water Quality, environmental interests, agricultural interests, and the scientific community with experience related to the committee's charge.

(E) Review, approve and summarize county or watershed local strategies and present these strategies to the Commission for approval within 2 years after the effective date of this Rule.

(F) Review, approve and summarize local nitrogen and phosphorus loading annual reports and present these reports to the Commission each October, until such time as the Commission determines that annual reports are no longer needed to assure long-term maintenance of the nutrient loads.

(3) ACCOUNTABILITY PROCESS. The Basin Oversight Committee shall develop an accountability process that meets the following requirements:

(A) The process shall quantify baseline total nitrogen and phosphorus loadings from agricultural operations in each county and for the entire basin.

(B) The process shall allocate the calculated nitrogen and phosphorus loads for agricultural operations to counties or watersheds within the Tar-Pamlico basin.

(C) The process shall include a means of tracking implementation of BMPs, including location, type, area affected.

(D) The process shall include a means of estimating incremental nitrogen and phosphorus reductions from actual BMP implementation and of evaluating progress toward the nutrient loads from BMP implementation.

(E) The process shall allow for future refinements to the nutrient baseline loading determinations, and to the load reduction accounting methodology.

(F) The process shall provide for quantification of changes in nutrient loading due to changes in land use, modifications in agricultural activity, or quantification of atmospheric nitrogen loading.

(G) The process shall include a method to track maintenance of the nutrient net loads after the initial five years of this Rule, including tracking of changes in BMPs and additional BMPs to offset new or increased sources of nutrients from agricultural operations.

(H) A draft accountability process shall be submitted to the Commission within six months after the effective date of the Rule. The final accountability process shall be submitted to the Commission for approval within one year after the effective date of the Rule. If the Commission does not approve the final accountability process, the Basin Oversight Committee will have an additional three months to revise and resubmit the process to the Commission. If the Commission does not approve an accountability process within 15 months of the effective date of this Rule, then the Commission may require all agricultural operations to follow Option 2 set forth in Paragraph (e) of this Rule.

(m) LOCAL ADVISORY COMMITTEES. The Local Advisory Committees shall have the following membership, roles, and responsibilities.

(1) MEMBERSHIP. The Commission shall delegate to the Directors of the Division of Water Quality and the Division of Soil and Water Conservation the responsibility of forming Local Advisory Committees within two months of the effective date of this Rule. The Directors shall form Local Advisory Committees in each county (or watershed as specified by the Basin Oversight Committee) within the Tar-Pamlico River Basin. Members shall serve for terms of five years at the pleasure of the Environmental Management and Soil and Water Conservation Commissions. Until such time as the Commission determines that long-term maintenance of the nutrient loads is assured, the Directors shall reappoint or replace members every five years. The Directors shall solicit nominations for membership on the Local Advisory Committee that represent each of the following interests:

(A) Local Soil and Water Conservation District (one),

(B) Local United States Department of Agriculture- Natural Resources Conservation Service (one),

(C) Local North Carolina Department of Agriculture and Consumer Services (one),

(D) Local North Carolina Cooperative Extension Service (one),

(E) Local North Carolina Division of Soil and Water Conservation (one),

(F) Local farmers in the county or watershed (at least two).

(2) ROLE. The Local Advisory Committees shall:

(A) Conduct a sign-up process for persons wishing to voluntarily implement the local strategy pursuant to Paragraph (e) of this Rule. This sign-up process shall be completed within one year after the effective date of this Rule.

(B) Designate a member agency to compile and retain copies of all individual plans produced under Paragraph (e) of this Rule.

(C) Develop local nutrient control strategies for agricultural operations, pursuant to Subparagraph (m)(3) of this Rule, to meet the nitrogen and phosphorus loads assigned by the Basin Oversight Committee. Those strategies shall be submitted to the Basin Oversight Committee no later than twenty-three months from the effective date of this Rule.

(D) Ensure that any changes to the design of the local strategy will continue to meet the nutrient loads of this Rule.

(E) Submit annual reports to the Basin Oversight Committee, pursuant to Subparagraph (m)(4) of this Rule, each May until such time as the Commission determines that annual reports are no longer needed to assure long-term maintenance of the nutrient loads.

(3) LOCAL NUTRIENT CONTROL STRATEGIES. The Local Advisory Committees shall be responsible for developing county or watershed nutrient control strategies that meet the following requirements.

(A) Local nutrient control strategies shall be designed to achieve the required nitrogen and phosphorus loads within five years after the effective date of this Rule, and to maintain those reductions in perpetuity or until such time as this Rule is revised to modify this requirement.

(B) Local nutrient control strategies shall specify the names and locations of all agricultural operations within their areas, numbers and acres of BMPs that will be implemented by enrolled operations, estimated nitrogen and phosphorus reductions, schedule for BMP implementation, and operation and maintenance requirements.

(C) Local nitrogen control strategies are not required to be more stringent than the standard BMP option provided that the nutrient loads is achieved collectively; however, the Local Advisory Committees may develop strategies that achieve greater reductions than the nutrient loads.

(D) If the Local Advisory Committee fails to develop the local nutrient control strategy, the Commission may develop the strategy based on the tracking and accounting method approved by the Commission.

(4) ANNUAL REPORTS. The Local Advisory Committees shall be responsible for submitting annual reports for their counties or watersheds. Annual reports shall be submitted to the Basin Oversight Committee each May until such time as the Commission determines that annual reports are no longer needed to assure long-term maintenance of the nutrient loads. Annual reports should include the following information on local agricultural operations, summarized separately for cropland, livestock and poultry activities:

(A) Documentation of BMPs implemented (including type, location, and area affected) under the local strategy and their costs.

(B) Documentation of BMPs discontinued under the local strategy.

(C) Changes in land use or agricultural activity and any associated increases or decreases in nitrogen and phosphorus loading resulting from these changes.

(D) Documentation of success in operation and maintenance of BMPs under the local strategy.

(E) Net nitrogen and phosphorus loading changes from agricultural operations under the local strategy, and progress towards or maintenance of the nitrogen and phosphorus loads.

(F) Requests for modifications to accounting practices or nutrient loads.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

NUTRIENT MANAGEMENT

15A NCAC 2B .0257 is proposed for adoption as follows:

(ALTERNATIVE 1)

.0257 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: NUTRIENT MANAGEMENT

(a) PURPOSE. The two primary purposes of this Rule are: to reduce the nitrogen loading and to maintain the phosphorus loading to the Pamlico estuary resulting from fertilizer application. Achievement of these objectives will be measured based on 1991 loading levels and are to be achieved within five years from the effective date of this Rule.

(b) APPLICABILITY. This Rule shall apply as follows.

(1) This Rule shall apply to the following persons who apply nutrients to their lands:

(A) Persons who own or manage cropland areas that together comprise at least 50 acres that have not developed a nutrient management plan for their property pursuant to 15A NCAC 2B .0256.

(B) Persons who own or manage floriculture areas, ornamental areas and greenhouse production areas that together comprise at least 50 acres.

(C) Persons who own or manage golf courses, recreational lands, rights-of-way, or other turfgrass areas.

(D) Persons who own or manage lawn and garden areas in residential, commercial, or industrial developments except for residential landowners who apply fertilizer to their own property.

(2) This Rule shall apply to applicators hired by the persons listed in Subparagraph (b)(1). Subparagraph (c)(2) sets forth the potential requirements for applicators.

(3) This Rule shall apply to applicators, hired by residential landowners, who apply fertilizer to residential areas in the Tar-Pamlico basin.

(4) This Rule shall apply to consultants hired by the persons listed in Subparagraph (b)(1) or by applicators. Subparagraph (c)(2) sets forth the requirements for consultants.

(c) REQUIREMENTS. Subject persons shall meet the following requirements:

(1) Persons responsible for applying nutrients to their own land or land that they manage shall either:

(A) Attend and successfully complete nutrient management training pursuant to Paragraph (d), or

(B) Complete a nutrient management plan for all lands to which they apply or manage the application of nutrients, pursuant to Paragraph (e).

(2) Persons who hire an applicator to apply nutrients to the land that they own or manage shall either:

(A) Ensure that the applicator they hire has attended and successfully completed nutrient management training pursuant to Paragraph (d), or

(B) Ensure that the applicator they hire has completed a nutrient management plan for the land that they own or manage pursuant to Paragraph (e), or

(C) Complete a nutrient management plan for the land that they own or manage pursuant to Paragraph (e) and ensure that the applicator they hire follows this plan.

(4) Applicators, hired by residential landowners, who apply fertilizer to residential areas in the Tar-Pamlico basin shall attend and successfully complete nutrient management training pursuant to Paragraph (d).

(5) Consultants who prepare nutrient management plans for persons who own or manage land or who apply nutrients to land in the Tar-Pamlico basin shall attend and successfully complete nutrient management training pursuant to Paragraph (d).

(d) NUTRIENT MANAGEMENT TRAINING. Persons who choose to meet this Rule's requirements by completing nutrient management training shall meet the following requirements.

(1) Within one year from the effective date of this Rule, the person shall sign up with the Cooperative Extension Service or the Division to take the nutrient management training.

(2) Within five years from the effective date of this Rule, the person shall obtain a certificate from the Cooperative Extension Service or the Division verifying completion of training that addresses, at minimum, proper management of nitrogen and phosphorus.

(3) Persons who fail to sign up or to obtain the nutrient management certificate within the required timeframes shall be required to develop and properly implement nutrient management plans pursuant to Paragraph (e).

(4) Training certificates must be kept on-site or be produced within 24 hours of a request by the Division.

(e) NUTRIENT MANAGEMENT PLANS. Persons who choose to meet this Rule's requirements by completing a nutrient management plan shall meet the following requirements.

(1) Within five years of the effective date of this Rule, a nutrient management plan that meets the following standards shall be developed:

(A) Nutrient management plans for cropland shall meet the standards and specifications adopted by the NC Soil and Water Conservation Commission.

(B) Nutrient management plans for application of dry poultry litter from animal waste management systems involving 30,000 or more birds, as required under NC Statute §143-215.10C(f), shall stipulate application of litter at agronomic rates for nitrogen. Agronomic rates shall be based on realistic yield expectations derived from waste nutrient content, crop and soil type, or yield records.

(C) Nutrient management plans for turfgrass shall follow the North Carolina Cooperative Extension Service guidelines in "Water Quality and Professional Lawn Care" (NCCES publication number WQMM-155), "Water Quality and Home Lawn Care" (NCCES publication number WQMM-151), or guidelines distributed by land-grant universities. Copies may be obtained from the Division of Water Quality, 512 North Salisbury Street, Raleigh, North Carolina 27626 at no cost.

(D) Nutrient management plans for nursery crops and greenhouse production shall follow the Southern Nurserymen's Association guidelines promulgated in "Best Management Practices Guide For Producing Container-Grown Plants" or guidelines distributed by land-grant universities. Copies may be obtained from the Southern Nurserymen's Association, 1000 Johnson Ferry Road, Suite E-

130, Marietta, GA 30068-2100 at a cost of thirty-five dollars ($35.00). The materials related to nutrient management plans for turfgrass, nursery crops and greenhouse production are hereby incorporated by reference including any subsequent amendments and editions and are available for inspection at the Department of Environment and Natural Resources Library, 512 North Salisbury Street, Raleigh, North Carolina.

(2) The person who writes the nutrient management plan shall have the plan approved in writing by a technical specialist. Appropriate technical specialists shall be as follows.

(A) Nutrient management plans for cropland and application of dry poultry litter shall be approved by a technical specialist designated pursuant to Rules adopted by the Soil and Water Conservation Commission.

(B) Nutrient management plans for turfgrass and nursery crops and greenhouse production shall be approved by a technical specialist designated pursuant to Rules adopted by the Commission.

(3) Nutrient management plans and supporting documents must be kept on-site or be produced within 24 hours of a request by the Division.

(4) The Division shall develop model nutrient management plans in consultation with the Cooperative Extension Service. The model plans shall address both nitrogen and phosphorus, and shall address the source of nutrients, the amount of nutrient applied, the placement of nutrients, and the timing of nutrient applications.

(f) COMPLIANCE. Persons who fail to comply with this Rule are subject to enforcement measures authorized in G.S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S. 143-215.6C (injunctive relief).

(ALTERNATIVE 2)

Same as alternative 1 with the exception of (b)(1), which would read:

(b) APPLICABILITY. This Rule shall apply as follows.

(1) This Rule shall apply to the following persons who apply nutrients to their lands:

(A) Persons who own or manage cropland areas for commercial purposes that have not developed a nutrient management plan for their property pursuant to 15A NCAC 2B .0256.

(B) Persons who own or manage commercial floriculture areas, ornamental areas and greenhouse production areas.

(C) Persons who own or manage golf courses, recreational lands, rights-of-way, or other turfgrass areas.

(D) Persons who own or manage lawn and garden areas in residential, commercial, or industrial developments except for residential landowners that apply fertilizer to their own property.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

URBAN STORMWATER

15A NCAC 2B .0258 is proposed for adoption as follows:

.0258 TAR-PAMLICO RIVER BASIN-NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: BASINWIDE STORMWATER REQUIREMENTS

(a) PURPOSE. The purpose of this Rule is to achieve a 30 percent reduction in nutrient loading from existing and new developments. The purpose of this Rule is also to provide control for peak flows in new development to ensure that the functions of existing riparian buffers are not compromised by channel erosion.

(b) APPLICABILITY. This Rule shall apply to local governments in the Tar-Pamlico basin according to the following criteria.

(1) This Rule shall apply to the following municipal areas:
   (A) Greenville
   (B) Henderson
   (C) Oxford
   (D) Rocky Mount
   (E) Tarboro
   (F) Washington

(2) This Rule shall apply to the following counties:
   (A) Beaufort
   (B) Edgecombe
   (C) Franklin
   (D) Halifax
   (E) Nash
   (F) Pitt

(3) Additional local governments shall become subject to this Rule upon meeting the following criteria:
   (A) Active incorporated municipal areas with populations exceeding 5,000 persons according to the most recent population estimates listed in the most recent annual publication of *North Carolina Municipal Populations*, Office of State Planning. If a municipal area has only a portion of its area within the Tar-Pamlico River basin, then the percentage of the municipality's area within the basin shall be multiplied by the population estimate; if the result is less than 5,000, then the municipal area shall not be subject to this Rule.
   (B) Counties with populations exceeding 30,000 persons according to the population estimates listed in the most recent annual publication *North Carolina Municipal Populations*, Office of State Planning. If a county has only a portion of its area within the Tar-Pamlico River basin, then the

percentage of the county's area within the basin shall be multiplied by the population estimate; if the result is less than 30,000, then the county shall not be subject to this Rule.

(c) REQUIREMENTS. All local governments subject to this Rule shall develop stormwater management programs for submission to and approval by the Commission. The stormwater program shall include the following components at a minimum:

(1) A requirement that developers submit a stormwater management plan for all new developments proposed within their jurisdictions. These stormwater plans shall not be approved by the subject local governments unless the following criteria are met:

(A) The nitrogen load contributed by the proposed new development activity shall not exceed 4.0 pounds per acre per year. This is equivalent to 70 percent of the average nitrogen load contributed by the non-urban areas in the Tar-Pamlico River basin based on 1995 land use data. The Commission may periodically update the design standard based on the availability of new scientific information.

(B) The phosphorus load contributed by the proposed new development activity shall not exceed 0.4 pounds per acre per year. This is equivalent to the average phosphorus load contributed by the non-urban areas in the Tar-Pamlico River basin based on 1995 land use data. The Commission may periodically update the design standard based on the availability of new scientific information

(C) The new development activity does not result in a net increase in peak flow leaving the site from the predevelopment conditions for the 1-year, 24-hour storm.

(2) A public education program to inform citizens of how to reduce nutrient pollution and to inform developers about the nutrient and flow control requirements set forth in Part (c)(1)(A).

(3) A mapping program that includes major components of the municipal separate storm sewer system, waters of the State, land use types, and location of sanitary sewers.

(4) A program to identify and remove illegal discharges.

(5) A program to identify and prioritize opportunities to achieve nutrient reductions from existing developed areas.

(6) A program to ensure maintenance of BMPs implemented as a result of the provisions in Subparagraphs (c)(1) and (c)(5).

(7) A program to ensure enforcement and compliance with the provisions in Subparagraph (c)(1).

(d) TIMEFRAME FOR IMPLEMENTATION. The timeframe for implementing the stormwater management program shall be as follows:

(1) Within 12 months of the effective date of this Rule, the Division shall submit a model local stormwater program to the Commission for approval. The Division shall work in cooperation with subject local governments in developing this model program.

(2) Within 12 months of the Commission's approval of the model local stormwater program or within 12 months of a local government's later designation pursuant to Subparagraph (b)(3), subject local

governments shall submit their local stormwater management programs to the Commission for review and approval. These local programs shall equal or exceed the requirements in Paragraph (c) of this Rule.

(3) Within 18 months of the Commission's approval of the model local stormwater program or within 18 months of a local government's later designation pursuant to Subparagraph (b)(3), subject local governments shall adopt and implement their approved local stormwater management program.

(4) 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.

(e) COMPLIANCE. A local government that fails to submit an acceptable local stormwater management program within the timeframe established in this Rule or fails to implement an approved program shall be in violation of this Rule. In this case, the stormwater management requirements for its jurisdiction shall be administered through the NPDES municipal stormwater permitting program per 15A NCAC 2H .0126. Any local government that is subject to an NPDES municipal stormwater permit pursuant to this Rule shall:

(1) Develop and implement comprehensive stormwater management program to reduce nutrients from both existing and new development. This stormwater management program shall meet the requirements of Paragraph (c) of this Rule for new and existing development.

(2) Be subject to the NPDES permit for at least one permitting cycle (five years) before it is eligible to submit a local stormwater management program to the Commission for consideration and approval.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-282(d); 143-215.6A; 143-215.6B; 143-215.6C.*
Eff. August 1, 2000.

RIPARIAN BUFFER PROTECTION

15A NCAC 2B .0259 is proposed for adoption as follows:

.0259 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: PROTECTION AND MAINTENANCE OF RIPARIAN BUFFERS

The following is the management stategy for maintaining and protecting riparian buffers in the Tar-Pamlico River Basin:

(1) PURPOSE. The purpose of this Rule shall be to protect and preserve riparian buffers in the Tar-Pamlico River Basin to maintain their nutrient removal functions.

(2) DEFINITIONS. For the purpose of this Rule, these terms shall be defined as follows:

(a) 'Channel' means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water. (current definition in Forest Practice Guidelines Related to Water Quality, 15A NCAC 1I .0102)

(b) 'DBH' means Diameter at Breast Height of a tree, which is measured at 4.5 feet above ground surface level.

(c) 'Ditch or canal' means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.

(d) 'Ephemeral (stormwater) stream' means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.

(f) 'Forest plantation' means an area of planted trees that may be conifers (pines) or hardwoods. On a plantation, the intended crop trees are planted rather than naturally regenerated from seed on the site, coppice (sprouting), or seed that is blown or carried into the site.

(g) 'High Value Tree' means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; and, for hardwood or wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.

(h) 'Intermittent stream' means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the continuous conveyance of water.

(i) 'Modified natural stream' means an on-site channelization or relocation of a stream channel and subsequent relocation of the intermittent or perennial flow as evidenced by topographic alterations in the immediate watershed. A modified natural stream must have the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

(j) 'Perennial stream' means a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

(k) 'Perennial waterbody' means a natural or man-made basin that stores surface water permanently at depths sufficient to preclude growth of rooted plants, including lakes, ponds, sounds, non-stream estuaries and ocean. For the purpose of the State's riparian buffer protection program, the waterbody must be part of a natural drainageway (i.e., connected by surface flow to a stream).

(l) 'Stream' means a body of concentrated flowing water in a natural low area or natural channel on the land surface.

(m) 'Tree' means a woody plant with a DBH equal to or exceeding 5 inches.

(3) APPLICABILITY. This Rule shall apply to 50-foot wide riparian buffers directly adjacent to surface waters in the Tar-Pamlico River Basin (intermittent streams, perennial streams, lakes, ponds, and estuaries), excluding wetlands. The riparian buffers protected by this Rule shall be measured pursuant to Item (4) of this Paragraph. For the purpose of this Rule, a surface water shall be present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). Riparian buffers adjacent to surface waters that do not appear on either of the maps shall not be subject to this Rule. Riparian buffers adjacent to surface waters that appear on the maps shall be subject to this Rule unless one of the following applies.

(a) EXEMPTION WHEN AN ON-SITE DETERMINATION SHOWS THAT SURFACE WATERS ARE NOT PRESENT. When a landowner or other affected party believes that the maps have inaccurately depicted surface waters, he or she shall consult the Division or the appropriate delegated local authority. Upon request, the Division or delegated local authority shall make on-site determinations. Any disputes over on-site determinations shall be referred to the Director in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of Chapter 150B of the General Statutes. Surface waters that appear on the maps shall not be subject to this Rule if an on-site determination shows that they fall into one of the following categories.

(i) Ditches and manmade conveyances other than modified natural streams.

(ii) Manmade ponds and lakes that are located outside natural drainage ways.

(iii) Ephemeral (stormwater) streams.

(b) EXEMPTION WHEN EXISTING USES ARE PRESENT AND ONGOING. This Rule shall not apply to portions of the riparian buffer where a use is existing and ongoing according to the following:

(i) A use shall be considered existing if it was present within the riparian buffer as of August 1, 2000. Existing uses shall include, but not be limited to, agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems. Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from this Rule. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from Zone 1, existing diffuse flow is maintained, and surface waters are not disturbed. Grading and revegetating Zone 2 is allowed provided that the health of the vegetation in Zone 1 is not compromised, the ground is stabilized and existing diffuse flow is maintained.

(ii) At the time an existing use is converted to another use, this Rule shall apply. An existing use shall be considered to be converted to another use if any of the following applies:

(A) Impervious surface is added to the riparian buffer in locations where it did not exist previously.

(B) An agricultural operation within the riparian buffer is taken out of production.

(C) A lawn within the riparian buffer ceases to be maintained.

(4) ZONES OF THE RIPARIAN BUFFER. The protected riparian buffer shall have two zones as follows:

(a) Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided for in Item (6) of this Paragraph. The location of Zone 1 shall be as follows:

(i) For intermittent and perennial streams, Zone 1 shall begin at the most landward limit of the top of bank or the rooted herbaceous vegetation and extend landward a distance of 30 feet on all sides of the surface water, measured horizontally on a line perpendicular to the surface water.

(ii) For ponds, lakes and reservoirs located within a natural drainage way, Zone 1 shall begin at the most landward limit of the normal water level or the rooted herbaceous vegetation and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water.

(iii) For surface waters within the 20 Coastal Counties (defined in 15A NCAC 2B .0202) within the jurisdiction of the Division of Coastal Management, Zone 1 shall begin at the most landward limit of the normal high water level, the normal water level, or the landward limit of coastal wetlands as defined by the Division of Coastal Management and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water.

(b) Zone 2 shall consist of a stable, vegetated area that is undisturbed except for activities and uses provided for in Item (6) of this Paragraph. Grading and revegetating Zone 2 is allowed provided that the health of the vegetation in Zone 1 is not compromised. Zone 2 shall begin at the outer edge of Zone 1 and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones 1 and 2 shall be 50 feet on all sides of the surface water.

(5) DIFFUSE FLOW REQUIREMENT. Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow and reestablishing vegetation.

(a) Concentrated runoff from new ditches or manmade conveyances shall be converted to diffuse flow before the runoff enters the riparian buffer.

(b) Periodic corrective action to restore diffuse flow shall be taken if necessary to impede the formation of erosion gullies.

(6) TABLE OF USES. The following chart sets out the uses and their designation under this Rule as exempt, allowable, allowable with mitigation, or prohibited. The requirements for each category are given in Item (7) of this Paragraph.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Airport facilities: • Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer		X	X	
Archaeological activities	X			
Bridges		X		
Dam maintenance activities	X			

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Drainage ditches, roadside ditches and stormwater outfalls through riparian buffers: • Existing drainage ditches, roadside ditches, and stormwater outfalls provided that they are managed to minimize the sediment, nutrients and other pollution that convey to waterbodies • New drainage ditches, roadside ditches and stormwater outfalls provided that a stormwater management facility is installed to control nitrogen and attenuate flow before the conveyance discharges through the riparian buffer • New drainage ditches, roadside ditches and stormwater outfalls that do not provide control for nitrogen before discharging through the riparian buffer • Excavation of the streambed in order to bring it to the same elevation as the invert of a ditch	X	X		X X
Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the new channel	X			
Driveway crossings: • Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer • Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer • In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer • In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre or riparian buffer	X	X X	X	

			Allowable	

	Exempt	Allowable	with Mitigation	Prohibited
Fences provided that disturbance is minimized and installation does not result in removal of forest vegetation	X			
Forest harvesting - see Item (11) of this Rule				
Fertilizer application: • One-time fertilizer application to establish replanted vegetation • Ongoing fertilizer application	X			X
Grading and revegetation in Zone 2 only provided that diffuse flow and the health of existing vegetation in Zone 1 is not compromised and disturbed areas are stabilized	X			
Greenway trails		X		
Historic preservation	X			
Landfills				X
Mining activities: • Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of Items (4) and (5) are established adjacent to the relocated channels • Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements or Items (4) and (5) are not established adjacent to the relocated channels		X	X	

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Non-electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only • Impacts other than perpendicular crossings in Zone 1 • Perpendicular crossings that disturb equal to or less than 40 linear feet of riparian buffer • Perpendicular crossings that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer • Perpendicular crossings that disturb greater than 150 linear feet of riparian buffer	X	X X	X X	
On-site sanitary sewage systems - new ones that use ground absorption				X
Overhead electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only • Impacts other than perpendicular crossings in Zone 1 [1,2] • Perpendicular crossings that disturb equal to or less than 150 linear feet of riparian buffer [1] • Perpendicular crossings that disturb greater than 150 linear feet of riparian buffer [1, 2]	X X X	X		
Periodic maintenance of modified natural streams such as canals and a grassed travelway on one side of the surface water when alternative forms of maintenance access are not practical		X		

[1] Provided that, in Zone 1, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternatives evaluation by the Division.

- A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.
- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.

- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut.
- Rip rap shall not be used unless it is necessary to stabilize a tower.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.
- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
- Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

[2] Provided that poles or towers shall not be installed within 10 feet of a water body unless the Division completes a no practical alternatives evaluation.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Playground equipment: • Playground equipment on single family lots provided that installation and use does not result in removal of vegetation • Playground equipment installed on lands other than single-family lots or that requires removal of vegetation	X	X		
Ponds in natural drainage ways: • New ponds provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the pond • New ponds where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the pond		X	X	
Protection of existing structures and facilities when this requires additional disturbance of the riparian buffer or the stream channel		X		
Railroad crossings: • Railroad crossings that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer		X	X	

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Removal of previous fill or debris provided that diffuse flow is maintained and any vegetation removed is restored	X			
Road crossings: • Road crossings that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Road crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer		X	X	
Scientific studies and stream gauging	X			
Stormwater management ponds: • New stormwater management ponds provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the pond • New stormwater management ponds where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the pond		X	X	
Stream restoration	X			
Streambank stabilization		X		
Temporary roads: • Temporary roads that disturb less than or equal to 2,500 square feet provided that vegetation is restored within six months • Temporary roads that disturb greater than 2,500 square feet provided that vegetation is restored within six months	X	X		

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Temporary sediment and erosion control devices: • In Zone 2 only provided that the vegetation in Zone 1 is not compromised and that discharge is released as diffuse flow in accordance with Item (5) • In Zones 1 and 2 to control impacts associated with uses approved by the Division or that have received a variance provided that sediment and erosion control for upland areas is addressed to the maximum extent practical outside the buffer • In-stream temporary erosion and sediment control measures for work within a stream channel	X X	 X		
Underground electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only • Impacts other than perpendicular crossings in Zone 1[3] • Perpendicular crossings that disturb less than or equal to 40 linear feet of riparian buffer[3] • Perpendicular crossings that disturb greater than 40 linear feet of riparian buffer[3]	X X X 	 X		

[3] Provided that, in Zone 1, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternatives evaluation by the Division.

- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench, where trees are cut.
- Underground cables shall be installed by vibratory plow or trenching.
- The trench shall be backfilled with the excavated soil material immediately following cable installation.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.
- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
- Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.

- In wetlands, mats shall be utilized to minimize soil disturbance.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Vegetation management: • Emergency fire control measures provided that topography is restored • Periodic mowing and harvesting of plant products in Zone 2 only • Planting vegetation to enhance the riparian buffer • Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised • Removal of individual trees which are in danger of causing damage to dwellings, other structures or human life • Removal or poison ivy • Removal of understory nuisance vegetation as defined in: Smith, Cherri L. 1998. Exotic Plant Guidelines. Department of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30	X X X X X X			
Water dependent structures as defined in 15A NCAC 2B .0202		X		
Water supply reservoirs: • New reservoirs provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the reservoir • New reservoirs where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the reservoir		X	X	
Water wells	X			
Wetland restoration	X			

(7) REQUIREMENTS FOR CATEGORIES OF USES. Uses designated as exempt, allowable, allowable with mitigation and prohibited in Item (6) of this Paragraph shall have the following requirements:

(a) EXEMPT. Uses designated as exempt are allowed within the riparian buffer. Exempt uses shall be designed, constructed and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable. In addition, exempt uses shall meet requirements listed in Item (6) of this Paragraph for the specific use.

(b) ALLOWABLE. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this Paragraph. These uses require written authorization from the Division or the delegated local authority.

(c) ALLOWABLE WITH MITIGATION. Uses designated as allowable with mitigation may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this Paragraph and an appropriate mitigation strategy has been approved pursuant to Item (10) of this Paragraph. These uses require written authorization from the Division or the delegated local authority.

(d) PROHIBITED. Uses designated as prohibited may not proceed within the riparian buffer unless a variance is granted pursuant to Item (9) of this Paragraph.

(8) DETERMINATION OF "NO PRACTICAL ALTERNATIVES." Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to the Division or to the delegated local authority. The applicant shall certify that the criteria identified in Sub-Item (8)(a) of this Paragraph are met. The Division or the delegated local authority shall grant an Authorization Certificate upon a "no practical alternatives" determination. The procedure for making an Authorization Certificate shall be as follows:

(a) For any request for an Authorization Certificate, the Division or the delegated local authority shall review the entire project and make a finding of fact as to whether the following requirements have been met in support of a "no practical alternatives" determination:

(i) The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(ii) The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(iii) Best management practices will be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(b) Requests for an Authorization Certificate shall be reviewed and either approved or denied within 60 days of receipt of a complete submission based on the criteria in Sub-Item (8)(a) of this Paragraph by either the Division or the delegated local authority. Failure to issue an approval or denial within 60 days shall constitute that the applicant has demonstrated "no practical alternatives." The Division or the delegated local authority may attach conditions to the Authorization Certificate that

support the purpose, spirit and intent of the riparian buffer protection program. Complete submissions shall include the following:

(i) The name, address and phone number of the applicant;

(ii) The nature of the activity to be conducted by the applicant;

(iii) The location of the activity, including the jurisdiction;

(iv) A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;

(v) An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and

(vi) Plans for any best management practices proposed to be used to control the impacts associated with the activity.

(c) Any disputes over determinations regarding Authorization Certificates shall be referred to the Director for a decision. The Director's decision is subject to review as provided in Articles 3 and 4 of Chapter 150B of the General Statutes.

(9) VARIANCES. Persons who wish to undertake uses designated as prohibited have the option of pursuing a variance. The Division or the appropriate delegated local authority may grant minor variances. The variance request procedure shall be as follows:

(a) For any variance request, the Division or the delegated local authority shall make a finding of fact as to whether the following requirements have been met:

(i) There are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of the riparian buffer protection requirements;

(ii) The variance is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and preserves its spirit; and

(iii) In granting the variance, the public safety and welfare have been assured water quality has been protected, and substantial justice has been done.

(b) MINOR VARIANCES. A minor variance request pertains to activities that are proposed only to impact any portion of Zone 2 of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Sub-Item (9)(a) of this Paragraph by the either the Division or the delegated local authority pursuant to G.S. 153A-Article 18, or G.S. 160A-Article 19. The Division or the delegated local authority may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Requests for appeals of decisions made by the Division shall be made to the Office of Administrative Hearings. Request for appeals made by the delegated local authority shall be made to the appropriate Board of Adjustment under G.S. 160A-388 or G.S. 153A-345.

(c) MAJOR VARIANCES. A major variance request pertains to activities that are proposed to impact any portion of Zone 1 or any portion of both Zones 1 and 2 of the riparian buffer. If the Division or the delegated local authority has determined that a major variance request meets the requirements in Sub-Item (9)(a) of this Paragraph, then it shall prepare a preliminary finding and submit it to the Commission. Preliminary findings on major variance requests shall be reviewed by the Commission within 90 days after receipt by the Director. Requests for appeals of determinations that the requirements of Sub-Item (9)(a) of this Paragraph have not been met shall be made to the Office of Administrative Hearings for determinations made by the Division or the appropriate Board of Adjustments under G.S. 160-388 or G.S. 153A-345 for determinations made by the delegated local authority. The purpose of the Commission's review is to determine if it agrees that the requirements in Sub-Item (9)(a) of this Paragraph have been met. Requests for appeals of decisions made by the Commission shall be made to the Office of Administrative Hearings. The following actions shall be taken depending on the Commission's decision on the major variance request:

(i) Upon the Commission's approval, the Division or the delegated local authority shall issue a final decision granting the major variance.

(ii) Upon the Commission's approval with conditions or stipulations, the Division or the delegated local authority shall issue a final decision, which includes these conditions or stipulations.

(iii) Upon the Commission's denial, the Division or the delegated local authority shall issue a final decision denying the major variance.

(10) MITIGATION. Persons who wish to undertake uses designated as allowable with mitigation shall meet the following requirements in order to proceed with their proposed use.

(a) Obtain a determination of "no practical alternatives" to the proposed use pursuant to Item (8) of this Paragraph.

(b) Obtain approval for a mitigation proposal pursuant to 15A NCAC 2B .0260.

(11) REQUIREMENTS SPECIFIC TO FOREST HARVESTING. The following requirements shall apply for forest harvesting operations and practices.

(a) The following measures shall apply in the entire riparian buffer:

(i) Logging decks and sawmill sites shall not be placed in the riparian buffer.

(ii) Access roads and skid trails shall be prohibited except for temporary and permanent stream crossings established in accordance with 15A NCAC 1I .0203. Temporary stream crossings shall be permanently stabilized after any site disturbing activity is completed.

(iii) Timber felling shall be directed away from the stream or water body.

(iv) Skidding shall be directed away from the stream or water body and shall be done in a manner that minimizes soil disturbance and prevents the creation of channels or ruts.

(v) Individual trees may be treated to maintain or improve their health, form or vigor.

(vi) Harvesting of dead or infected trees or application of pesticides necessary to prevent or control extensive tree pest and disease infestation shall be allowed. These practices must be approved by the Division of Forest Resources for a specific site. The Division of Forest Resources must notify the Division of all approvals.

(vii) Removal of individual trees that are in danger of causing damage to structures or human life shall be allowed.

(viii) Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer shall be allowed provided that soil disturbance is minimized. Plantings shall consist primarily of native species.

(ix) High intensity prescribed burns shall not be allowed.

(x) Application of fertilizer shall not be allowed except as necessary for permanent stabilization. Broadcast application of fertilizer or herbicides to the adjacent forest stand shall be conducted so that the chemicals are not applied directly to or allowed to drift into the riparian buffer.

(b) In Zone 1, forest vegetation shall be protected and maintained. Selective harvest as provided for below is allowed on forest lands that have a deferment for use value under forestry in accordance with G.S. 105-277.2 through 277.6 or on forest lands that have a forest management plan prepared or approved by a registered professional forester. Copies of either the approval of the deferment for use value under forestry or the forest management plan shall be produced upon request. For such forest lands, selective harvest is allowed in accordance with the following:

(i) Tracked or wheeled vehicles are not permitted except at stream crossings designed, constructed and maintained in accordance with 15A NCAC 1I .0203.

(ii) Soil disturbing site preparation activities are not allowed.

(iii) Trees shall be removed with the minimum disturbance to the soil and residual vegetation.

(iv) The following provisions for selective harvesting shall be met:

(A) The first 10 feet of Zone 1 directly adjacent to the stream or waterbody shall be undisturbed except for the removal of individual high value trees as defined provided that no trees with exposed primary roots visible in the streambank be cut.

(B) In the outer 20 feet of Zone 1, a maximum of 50 percent of the trees greater than 5 inches dbh may be cut and removed. The reentry time for harvest shall be no more frequent than every 15 years, except on forest plantations where the reentry time shall be no more frequent than every 5 years. In either case, the trees remaining after harvest shall be as evenly spaced as possible.

(C) In Zone 2, harvesting and regeneration of the forest stand shall be allowed provided that sufficient ground cover is maintained to provide for diffusion and infiltration of surface runoff.

(12) REQUIREMENTS SPECIFIC TO LOCAL GOVERNMENTS WITH STORMWATER PROGRAMS FOR NITROGEN CONTROL. Local governments that are required to have local stormwater programs pursuant to 15A NCAC 2B .0258 shall have two options for ensuring protection of riparian buffers on new developments within their jurisdictions as follows.

(a) Obtain authority to implement a local riparian buffer protection program pursuant to 15A NCAC 2B .0261.

(b) Refrain from issuing local approvals for new development projects unless either:

(i) The person requesting the approval does not propose to impact the riparian buffer of a surface water that appears on either the most recent versions of the soil survey maps prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent versions of the 1:24,000 scale (7.5 minute quadrangle) topographic maps prepared by the United States Geologic Survey (USGS).

(ii) The person requesting the approval proposes to impact the riparian buffer of a surface water that appears on the maps described in Sub-Item (12)(b)(i) of this Paragraph and either:

(A) Has received an on-site determination from the Division pursuant to Sub-Item (3)(a) of this Paragraph that surface waters are not present;

(B) Has received an Authorization Certificate from the Division pursuant to Item (8) of this Paragraph for uses designated as Allowable under this Rule;

(C) Has received an Authorization Certificate from the Division pursuant to Item (8) of this Paragraph and obtained the Division's approval on a mitigation plan pursuant to Item (10) of this Paragraph for uses designated as Allowable with Mitigation under this Rule; or

(D) Has received a variance from the Commission pursuant to Item (9) of this Paragraph.

(13) OTHER LAWS, REGULATIONS AND PERMITS. In all cases, compliance with this Rule does not preclude the requirement to comply with all federal, state and local regulations and laws.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

15A NCAC 2B .0260 is proposed for adoption as follows:

.0260 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: MITIGATION PROGRAM FOR PROTECTION AND MAINTENANCE OF RIPARIAN BUFFERS

The following are the requirements for the Riparian Buffer Mitigation Program for the Tar-Pamlico Basin:

(1) PURPOSE. The purpose of this Rule is to set forth the mitigation requirements that apply to the Tar-Pamlico Basin riparian buffer protection program, as described in Rule 15A NCAC 2B .0259.

(2) APPLICABILITY. This Rule applies to persons who wish to impact a riparian buffer in the Tar-Pamlico Basin when one of the following applies:

(a) A person has received an Authorization Certificate pursuant to 15A NCAC 2B .0259 for a proposed use that is designated as "allowable with mitigation."

(b) A person has received a variance pursuant to 15A NCAC 2B .0259 and is required to perform mitigation as a condition of a variance approval.

(3) THE AREA OF MITIGATION. The required area of mitigation shall be determined by either the Division or the delegated local authority according to the following:

(a) The impacts in square feet to each zone of the riparian buffer shall be determined by the Division or the delegated local authority by adding the following:

(i) The area of the footprint of the use causing the impact to the riparian buffer.

(ii) The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use.

(iii) The area of any ongoing maintenance corridors within the riparian buffer associated with the use.

(b) The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Sub-item (3)(a) of this Paragraph to each zone of the riparian buffer:

(i) Impacts to Zone 1 of the riparian buffer shall be multiplied by 3.

(ii) Impacts to Zone 2 of the riparian buffer shall be multiplied by 1.5.

(iii) Impacts to wetlands within Zones 1 and 2 of the riparian buffer that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

(4) THE LOCATION OF MITIGATION. The mitigation effort shall be located the same distance from the Pamlico River estuary as the proposed impact, or closer to the estuary than the impact.

(5) ISSUANCE OF THE MITIGATION DETERMINATION. The Division or the delegated local authority shall issue a mitigation determination that specifies the required area and location of mitigation pursuant to Items (3) and (4) of this Paragraph.

(6) OPTIONS FOR MEETING THE MITIGATION DETERMINATION. The mitigation determination made pursuant to Item (5) of this Paragraph may be met through one of the following options:

(a) Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to Item (7) of this Paragraph.

(b) Donation of real property or of an interest in real property pursuant to Item (8) of this Paragraph.

(c) Restoration or enhancement of a riparian buffer that is not otherwise required to be protected. This shall be accomplished by the applicant after submittal and approval of a restoration plan pursuant to Item (9) of this Paragraph.

(7) PAYMENT TO THE RIPARIAN BUFFER RESTORATION FUND. Persons who choose to satisfy their mitigation determination by paying a compensatory mitigation fee to the Riparian Buffer Restoration Fund shall meet the following requirements:

(a) SCHEDULE OF FEES: The amount of payment into the Fund shall be determined by multiplying the acres or square feet of mitigation determination made pursuant to Item (5) of this Paragraph by $0.96 per square foot or $41,625 per acre.

(b) The required fee shall be submitted to the Division of Water Quality, Wetlands Restoration Program, P.O. Box 29535, Raleigh, NC 27626-0535 prior to any activity that results in the removal or degradation of the protected riparian buffer for which a "no practical alternatives" determination has been made.

(c) The payment of a compensatory mitigation fee may be fully or partially satisfied by donation of real property interests pursuant to Item (8) of this Paragraph.

(d) The fee outlined in Sub-item (7)(a) of this Paragraph shall be reviewed every two years and compared to the actual cost of restoration activities conducted by the Department, including site identification, planning, implementation, monitoring and maintenance costs. Based upon this biennial review, revisions to Sub-item (7)(a) of this Paragraph will be recommended when adjustments to this Schedule of Fees are deemed necessary.

(8) DONATION OF PROPERTY. Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements:

(a) The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to Item (7) of this Paragraph. The value of the property interest shall be determined by an appraisal performed in accordance with Sub-item (8)(d)(iv) of this Paragraph. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to Sub-item (7)(a) of this Paragraph, the applicant shall pay the remaining balance due.

(b) The donation of conservation easements to satisfy compensatory mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.

(c) Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:

(i) The property shall be located within an area that is identified as a priority for restoration in the Basinwide Wetlands and Riparian Restoration Plan or shall be located at a site that is otherwise consistent with the goals outlined in the Basinwide Wetlands and Riparian Restoration Plan.

(ii) The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration.

(iii) The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.

(iv) The size of the restorable riparian buffer on the property to be donated shall equal or exceed the acreage of riparian buffer required to be mitigated under the mitigation responsibility determined pursuant to Item (3) of this Paragraph.

(v) The property shall not require excessive measures for successful restoration, such as removal of structures or infrastructure. Restoration of the property shall be capable of fully offsetting the adverse impacts of the requested use;

(vi) The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;

(vii) The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and land acquisition costs.

(ix) The property shall not contain cultural or historic resources.

(x) The property shall not contain any hazardous substance or solid waste.

(xi) The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water or sewer connections exist, they shall be filled, remediated or closed at owner's expense in accordance with state and local health and safety regulations.

(xii) The property shall have the potential to remove nitrogen, improve water quality and enhance natural resources after restoration. The Division shall consider whether the property is adjacent to or includes:

(A) a Department-approved restoration or preservation project or public lands;

(B) a sensitive natural resource, as identified in the Basinwide Wetland and Riparian Restoration Plan;

(C) known occurrences of rare species as identified by the North Carolina Natural Heritage Program in the "Natural Heritage Program List of Rare Animal Species of North Carolina" or the "Natural Heritage Program List of the Rare Plant Species of North Carolina;"

(D) significant Natural Heritage Area as identified by the North Carolina Natural Heritage Program in the "North Carolina Natural Heritage Program Biennial Protection Plan,

List of Significant Natural Heritage Areas." Copies of these documents may be obtained from the Department of Environment and Natural Resources, Division of Parks and Recreation, Natural Heritage Program, P.O. Box 27687, Raleigh, North Carolina 27611;

(E) federally or state-listed sensitive, endangered, or threatened species, or their critical habitat;

(F) non-supporting, partially supporting, or support-threatened waters as designated by the Division pursuant to 40 CFR 131.10(a) through (g). This material is available at the Department of Environment and Natural Resources, Division of Water Quality, Water Quality Section, 512 North Salisbury Street, Raleigh, North Carolina 27604;

(xiii) The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort.

(xiv) The property shall not have any encumbrances or conditions on the transfer of the property interests.

(d) At the expense of the applicant or donor, the following information shall be submitted to the Division with any proposal for donations or dedications of interest in real property:

(i) Documentation that the property meets the requirements laid out in Sub-Item (8)(c) of this Paragraph.

(ii) US Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, USDA Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with information on existing site conditions, vegetation types, presence of existing structures and easements.

(iii) A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the State Board of Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609.

(iv) A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734.

(v) A title certificate.

(9) RIPARIAN BUFFER RESTORATION OR ENHANCEMENT. Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:

(a) The applicant may restore or enhance a riparian buffer that is not protected under the State's riparian buffer protection program if either of the following applies:

(i) The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Item (3) of this Paragraph.

(ii) The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Item (3) of this Paragraph.

(b) The location of the riparian buffer restoration or enhancement shall comply with the requirements in Item (4) of this Paragraph.

(c) The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.

(d) The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of 15A NCAC 2B .0259. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the Division. The restoration or enhancement plan shall contain the following.

(i) A map of the proposed restoration or enhancement site.

(ii) A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity.

(iii) A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer.

(iv) A fertilization plan.

(v) A schedule for implementation.

(e) Within one year after the Division has approved the restoration or enhancement plan, the applicant shall present proof to the Division that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of the State's or the delegated local authority's riparian buffer protection program.

(f) The mitigation area shall be placed under a perpetual conservation easement whose terms are acceptable to the Division.

(g) The applicant shall submit annual reports for a period of five years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall be responsible for replacing trees that do not survive and for restoring diffuse flow if needed during that five-year period.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

15A NCAC 2B .0261 is proposed for adoption as follows:

.0261 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: DELEGATION OF AUTHORITY FOR THE PROTECTION AND MAINTENANCE OF RIPARIAN BUFFERS

This Rule sets out the following requirements for delegation of the responsibility for implementing and enforcing the Tar-Pamlico Basin riparian buffer protection program to local governments:

(1) PROCEDURES FOR GRANTING AND RESCINDING DELEGATION. The Commission shall grant and rescind local government delegation of the Tar-Pamlico River Basin Riparian Buffer Protection requirements, as described in Rule 15A NCAC 2B. 0259, according to the following procedures.

(a) Local governments within the Tar-Pamlico River Basin may submit a written request to the Commission for authority to implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements within their jurisdiction. The written request shall be accompanied by information which shows:

(i) The local government has land use jurisdiction for the riparian buffer demonstrated by delineating the local land use jurisdictional boundary on USGS 1:24,000 topographical map(s) or other appropriate scale map(s);

(ii) The local government has the administrative organization, staff, legal authority, financial and other resources necessary to implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements based on its size and projected amount of development;

(iii) The local government has adopted ordinances, resolutions, or regulations necessary to establish and maintain the Tar-Pamlico Basin riparian buffer protection requirements; and

(iv) The local government has provided a plan to address violations with appropriate remedies and actions.

(b) Within 90 days after the Commission has received the request for delegation, the Commission shall notify the local government whether it has been approved, approved with modifications, or denied.

(c) The Commission, upon determination that a delegated local authority is failing to implement or adequately enforce the Tar-Pamlico Basin riparian buffer protection requirements, shall notify the delegated local authority in writing of the local program's inadequacies. If the delegated local authority has not corrected the deficiencies within 90 days of receipt of the written notification, then the Commission shall rescind the delegation of authority to the local government and shall implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements.

(d) The Commission may delegate its duties and powers for granting and rescinding local government delegation of the Tar-Pamlico Basin riparian buffer protection requirements, in whole or in part, to the Director.

(2) APPOINTMENT OF A RIPARIAN BUFFER PROTECTION ADMINISTRATOR. Upon receiving delegation, local governments shall appoint a Riparian Buffer Protection Administrator who shall coordinate the implementation and enforcement of the program. The Administrator shall attend an initial

training session by the Division and subsequent annual training sessions. The Administrator shall ensure that local government staff working directly with the program receive training to understand, implement and enforce the program.

(3) PROCEDURES FOR USES WITHIN RIPARIAN BUFFERS THAT ARE ALLOWABLE AND ALLOWABLE WITH MITIGATION. Upon receiving delegation, local authorities shall be responsible for reviewing proposed uses within the riparian buffer and issuing approvals if the uses meet the Tar-Pamlico Basin riparian buffer protection requirements. Delegated local authorities shall issue an Authorization Certificate for uses if the proposed use meets the Tar-Pamlico Basin riparian buffer protection requirements, or provides for appropriate mitigated provisions to the Tar-Pamlico Basin riparian buffer protection requirements. The Division shall have the authority to challenge a decision made by a delegated local authority for a period of 30 days after the Authorization Certificate is issued. If the Division does not challenge an Authorization Certificate within 30 days of issuance, then the delegated local authority's decision will stand.

(4) VARIANCES. After receiving delegation, local governments shall be responsible for reviewing variance requests, providing approvals for minor variance requests and making recommendations to the Commission for major variance requests pursuant to the Tar-Pamlico Basin riparian buffer protection program.

(5) LIMITS OF DELEGATED LOCAL AUTHORITY. The Commission shall have jurisdiction to the exclusion of local governments to implement the Tar-Pamlico Basin riparian buffer protection requirements for the following types of activities:

(a) Activities conducted under the authority of the State;

(b) Activities conducted under the authority of the United States;

(c) Activities conducted under the authority of multiple jurisdictions;

(d) Activities conducted under the authority of local units of government.

(6) RECORD-KEEPING REQUIREMENTS. Delegated local authorities are required to maintain on-site records for a minimum of 5 years. Delegated local authorities must furnish a copy of these records to the Director within 30 days of receipt of a written request for the records. The Division will inspect local riparian buffer protection programs to ensure that the programs are being adequately implemented and enforced. Each delegated local authority's records shall include the following:

(a) A copy of variance requests;

(b) The variance request's finding of fact;

(c) The result of the variance proceedings;

(d) A record of complaints and action taken as a result of the complaint;

(e) Records for stream origin calls and stream ratings; and

(f) Copies of request for authorization, records approving authorization and Authorization Certificates.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C. Eff. August 1, 2000.*

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Agriculture

Persons engaging in agricultural operations in the Tar-Pamlico River Basin have **two options** for complying with the proposed rule. The options are to either participate in a local nutrient control strategy or implement standard Best Management Practices. The two options are as follows:

Option 1 - Local Nutrient Control Strategy

Farmers may choose to participate in a countywide or watershed-wide strategy to reduce nitrogen loading by 30 percent and hold phosphorus loading to 1991 levels.

- Farmers would enroll for this option within one year of the rule's effective date.
- Farmers who enroll would provide **site-specific plans** for nutrient control to a Local Advisory Committee for review and approval based on the overall county/watershed nitrogen and phosphorus control goals.
- **Local Advisory Committees** would be composed of volunteers from local Soil and Water Conservation Districts (SWCD), local Natural Resources Conservation Service (NRCS), local N.C. Cooperative Extension Service (CES), Division of Soil and Water Conservation (DSWC), N.C. Department of Agriculture and Consumer Services (NCDACS), and at least two local farmers.
- Farmers who choose this option would be required to implement their plans within **5 years** of the effective date of the rule.
- A **Basin Oversight Committee**, made up of individuals from NRCS, DSWC, NCDACS, CES, DWQ, the environmental community, the scientific community, and agricultural interests, would have the following responsibilities:
  - Develop an accounting tool to estimate nutrient loading reductions from farming activities.
  - Review and approve local nutrient control strategies and report findings to the EMC.
  - Establish a technical committee to monitor the science on phosphorus and evaluate the need for management actions to meet the phosphorus loading goal.

Option 2 - Standard Best Management Practices (BMPs)

If a farmer does not select option 1, then he would have to implement standard BMPs. Farmers would choose from the following set of BMP options:

Nutrient Management + Controlled Drainage
or
20' forested buffer + (NM or controlled drainage)
or
30' vegetated buffer + (NM or controlled drainage)
or
30' forested buffer + 20' vegetated buffer

Farmers who choose this option would be required to implement their plans within **4 years** of the effective date of the rule.

Nutrient Management

Under this proposed rule, people who are involved in application of fertilizer to lands in the basin would have two options, as follows:

Option 1: successfully complete **nutrient management training** and certification provided by the Extension Service or the Division of Water Quality within 5 years of the effective date of the rule,

-OR-

Option 2: develop and implement **nutrient management plans** for the lands where they apply nutrients. Nutrient management plans would have to meet certain technical criteria based on the type of operation.

Two alternatives are proposed for public comment on whom the rule would apply to.

Alternative 1:
People who own or manage at least 50 acres of cropland, floriculture or greenhouse areas, and applicators and consultants hired by these people.

-OR-

Alternative 2:
All people who own or manage commercial cropland, floriculture, or greenhouse areas, and applicators and consultants hired by these people.

These two alternatives are being offered for public comment. The Environmental Management Commission will determine a single set of applicability requirements based on these comments and on recommendations of the Hearing Officers.

In addition, under either alternative, the rule would apply to the following people:

- People who own or manage golf courses, recreational lands, rights-of-way, other turfgrass areas,
- People who own or manage lawns or gardens in residential, commercial, or industrial property, except for residential landowners who fertilize their own property, and
- Applicators and consultants hired by any of the above people, including residential landowners.

Those who own or manage lands would have several options for complying with the rule. Under any option, they would be responsible for ensuring that either a nutrient management plan is in place for their lands or that people applying fertilizer to their lands obtain nutrient management training.

Urban Stormwater

The proposed rule would require local governments to implement stormwater management programs that include certain minimum elements. The following local governments would be affected by the proposed rule: 6 municipalities (Greenville, Henderson, Oxford, Rocky Mount, Tarboro, and Washington) and 6 counties (Beaufort, Edgecombe, Franklin, Halifax, Nash, and Pitt). In addition, the rule sets population thresholds of 5,000 for municipalities and 30,000 for counties. As local governments exceed these thresholds, they would be subject to the rule.

Each local program would include:

- A permitting program for all new development to achieve the 30% nitrogen reduction and "hold phosphorus at 1991" loading goals.
- Requirements for no net increase in peak flow from the pre-development 1-year, 24-hour storm from all new development.
- A public education program.
- Mapping of storm and sanitary sewers.
- Identification and removal of illegal discharges
- Prioritization of sites for installing stormwater practices in areas of existing development.
- Annual nutrient load reporting.

Local governments would be required to submit their programs for approval by the Environmental Management Commission as early as **two years** after the effective date of the rule. These programs would be implemented as early as **two and one-half years** after the effective date of the rule. The local governments would be responsible for compliance and enforcement activities. If a local government fails to develop such a program, it would be subject to NPDES stormwater permitting by the Division of Water Quality.

Protection and Maintenance of Existing Riparian Buffers

These rules would require that **existing** vegetated riparian buffers in the basin be protected and maintained. **This rule does not establish new buffers unless the existing use of the buffer changes.**

The rule would apply to areas where vegetation is already established in the 50 feet adjacent to intermittent and perennial streams, lakes, ponds, and estuarine waters. The rule would apply as follows:

- Waters subject to the rule are those shown on the most recent versions of either a county soil survey map prepared by the Natural Resources Conservation Service, or on the most recent versions of 1:24,000 scale topographic maps prepared by the US Geologic Survey, and that exist on the ground.
- The rule does not apply to the following waters: ditches and manmade conveyances other than modified natural streams, manmade ponds and lakes located outside natural drainageways, and ephemeral (stormwater) streams.

The first 30 feet (zone 1) of the buffer would remain essentially undisturbed. The landward 20 feet (zone 2) would be vegetated, but certain uses are allowed in this zone.

- A table of uses in the rule identifies the status of specific activities as "exempt", "allowable", "allowable with mitigation", or "prohibited".
- The footprints of existing uses are exempt. These uses include agriculture, buildings, industrial, commercial, and transportation facilities, maintained lawns, utility lines, and on-site wastewater systems.
- Examples of "exempt" activities include driveway and utility crossings of a certain size through zone 1, and grading and revegetation in zone 2.
- "Allowable" and "allowable with mitigation" activities require review by DWQ staff, and include activities such as new ponds in drainageways and road crossings. A separate buffer **mitigation rule** establishes requirements for activities that DWQ staff determines are "allowable with mitigation".
- Local governments may request delegation from the state to implement this rule, as spelled out in a separate buffer program **delegation rule**.
- In the basin's larger urban areas, protection of existing riparian areas would also be a component of the urban stormwater programs discussed above.

Frequently Asked Questions About the Proposed Tar-Pamlico Nutrient Rules for Agriculture

A number of questions have been raised often about the proposed Tar-Pamlico River Basin nutrient rules. Several of these frequently asked questions are given here, followed by responses prepared by Division of Water Quality staff. The detail and specificity of the rules may not be captured in these brief explanations, but they are meant to clarify common misunderstandings that may exist. You are encouraged to refer to the rules themselves to obtain complete information.

Q1: Do the proposed rules require farmers to establish buffers on waterways?

Response: No, not if they can implement other nutrient BMPs on their farms. There are two proposed rules that discuss buffers for agriculture - the **agriculture rule** (15A NCAC 2B .0255 and .0256) and the **buffer protection rule** (15A NCAC 2B .0259-.0261). Neither rule would *necessarily require* buffer establishment. Buffer establishment would be an option that farmers could choose to meet requirements of the agriculture rule.

- As proposed, the **buffer protection rule** is intended to *preserve established* riparian buffers adjacent to all land uses. Existing, ongoing agricultural activities would be exempt from the buffer protection rule. If a buffer were taken out of agricultural production, that buffer area would no longer be exempt. However, the rule language, as worded by the Neuse buffer stakeholder committee, states that for an activity in the buffer to remain exempt, removal of additional vegetation or disturbance of surface waters could not occur. Based on this wording, it would be difficult for existing cattle operations to remain exempt. DWQ staff will recommend that the Hearing Officers clarify this language to allow existing cattle operations to remain exempt.

- All agricultural operations in the basin would be required to comply with the **agriculture rule**. As proposed by the agriculture stakeholder team, buffer *establishment* would be an *option* under the 'standard BMPs' option for meeting the agriculture rule's requirements. Also as proposed under the standard BMPs option, a farmer could choose to establish narrower widths of buffer if he were to implement another nutrient reducing BMP, either nutrient management or water control structures, on his acres. If a farmer were to implement both water control structures and nutrient management under this option, there would be no buffer establishment requirement. A farmer's other option under the proposed agriculture rule would be to join in his 'local strategy'. This option was included to provide site-specific flexibility.

  Since water control structures don't generally apply to pasture cattle operations above the middle Coastal Plain, if these cattle operations choose the standard BMPs option, they would be faced with implementing full buffers or reduced buffers and nutrient management. DWQ encourages comments on other options that could be added to the standard BMPs to allow pasture cattle operations to reduce nutrient inputs to surface waters. If a cattle farmer chooses to join her local strategy, she would have site-specific flexibility to propose alternatives. Alternatives that reduce the amount of nutrient inputs from cattle into surface waters could be considered under this option. DWQ encourages your input.

Q2: Do the proposed rules for agriculture call for 50-foot forested buffers on waterways?

Response: No scenario in the proposed rules would call for *all* 50 feet to be forested. In the **agriculture rule**, where buffers are an option for meeting rule requirements, the maximum buffer width would be 50 feet, but made up of 30 feet of forest adjacent to surface waters, then 20 feet of vegetation, which would reduce shading impacts on adjacent croplands. As described in Q1, other agriculture rule options would allow for total buffer widths less than 50 feet, or even no buffers at all, if other BMPs are used as well. Also as described in Q1, existing, ongoing agricultural activities would be exempt from the requirements of the **riparian buffer protection rule**.

Q3: Do the proposed rules for agriculture call for buffers on all ditches, streams, ponds and lakes?

Response: As proposed, the **agriculture rule** does not require buffers on *all* water features. As described in Q1 above, buffers are not required under the agriculture rule to the extent that other BMPs can be used. In the agriculture rule, where buffers are an option for meeting rule requirements, they would be established on all sides of intermittent and perennial streams, lakes, ponds, and estuaries. These features would be determined based on the latest versions of 1:24,000-scale US Geological Survey topographic maps and on-the-ground or other site-specific evidence. Ditches that do not drain any other ditches would be exempt from this rule. Ponds and lakes created for agricultural uses such as animal watering and irrigation that are not part of a natural drainageway would be exempt.

As described in Q1 above, existing, ongoing agricultural activities would be exempt from the requirements of the **riparian buffer protection rule**. The buffer rule would only apply to agricultural lands that are taken out of production. Buffers would be required on these lands adjacent to perennial and intermittent streams, lakes, ponds, and estuaries, as shown on the most recent soil survey map or 1:24,000-scale US Geological Survey topographic map.

Q4: Will the proposed rules require farmers to fence out cattle from buffers?

Response: The **agriculture rule** as proposed does not explicitly address fencing out of cattle. Under the agriculture rule, if a farmer chooses buffer establishment as a BMP, the rule would prohibit "the creation of any areas with bare soil", and would require the forested riparian zone to be "established as undisturbed forest". This language suggests that cattle be excluded from buffers.

The local strategy option in the agriculture rule is intended to provide the farmer and his local committee flexibility to determine what is needed to meet the county's 30 percent reduction. If loading reductions were needed from a pasture-based cattle operation, it would need to consider reducing the nutrient inputs from cattle to surface waters that exist on the property. Fencing cattle out of the stream and providing alternate water and hardened crossings may be an option. Managed grazing with alternate water that minimizes cattle's use of the stream may be another option. As discussed under Q1 above, alternatives that reduce the amount of nutrient inputs from cattle into surface waters could be considered under this option. DWQ encourages your input.

As described in Q1 above, existing, ongoing agricultural activities would be exempt from the requirements of the **riparian buffer protection rule**. However, as also noted in Q1, rule wording that prohibits removal of additional vegetation or disturbance of surface waters in order to remain exempt needs to be clarified to address pasture cattle operations.

Q5: Will the proposed rules allow stream crossings for cattle?

Response: It is not the State's intent to prohibit animal crossings that are needed. However, in the **agriculture rule**, where buffers are an option for meeting rule requirements, there is currently no language specifically addressing animal crossings. DWQ encourages your input. As described in Q1 above, existing, ongoing agricultural activities would be exempt from the requirements of the **riparian buffer protection rule**.

Q6: Is it true that towns, homes, and golf courses have no rules?

Response: No, it's not true. The **urban stormwater rule, nutrient management rule, and riparian buffer protection rule** all apply to these land uses. Please see the summaries of these rules.

Q7: Are the Tar-Pamlico rules more restrictive and demanding than the Neuse River Basin rules?

Response: In general, the rules are very similar. The significant addition under the Tar-Pamlico Nutrient Sensitive Waters Strategy is that phosphorus inputs must be held to no more than 1991 levels. This is an objective that the Neuse rules were not required to include. The nutrient reduction goals and accounting requirements in the Tar-Pamlico agriculture and urban stormwater rules reflect this additional element. Stakeholder teams that developed rules for the Tar-Pamlico Basin recommended some changes from the Neuse rules, as follows:

- The agriculture rule includes some additional actions to address soluble phosphorus, such as establishing a technical committee to follow soluble phosphorus issues and make recommendations to the Environmental Management Commission.
- The agriculture rule explicitly includes horticulture as a type of agricultural operation that falls under the rule.
- The nutrient management rule does not include an acreage threshold for non-agricultural fertilizer applicators (the companion Neuse rule uses a 50-acre threshold). However, the Tar-Pamlico rule exempts residential landowners who apply fertilizer to their own property.
- Two alternative versions of the nutrient management rule requirements for agriculture are provided for public comment. One version uses the Neuse's 50-acre threshold, while the other does not include an acreage threshold, requiring all commercial agricultural fertilizer applicators to comply with the rule.

Summary of Oral and Written Comments
Received June 1 – October 15, 1999
On Proposed Rules for Tar-Pamlico Nutrient Sensitive Waters

Overview

The vast majority of commenters at both public hearings and during the first 60-day, "subject matter" comment period, stated general opposition to the proposed rules for agriculture, and many opposed temporary buffer rules. Numerous written comments were received in general support of the rules during the second 60-day comment period. Many of these commenters also supported temporary buffer rules.

Many comments at the hearings reflected the perceptions that all cattle operations would have to fence streams and provide alternative water to cattle, that they would have to establish undisturbed buffers, and that, on cropland, buffering would be required along all ditches. Comments addressed the high costs of fencing and providing water and the loss of usable land that would be tied up in buffers. Most speakers felt that the state had insufficient data to require rules for farmers. A large number wanted agriculture exempted from the rules and/or a return to the voluntary program, which they felt was working. Many were also against the exemption, under the nutrient rule, for homeowners, feeling that the rules should apply to everyone.

There were very few comments specific to urban stormwater. At the second hearing, two county planners spoke. They expressed concerns about their ability to enforce rules. One wanted to know how rules would dovetail with Phase II NPDES stormwater rules and water supply watershed rules.

Several counties submitted resolutions related to the rules. Granville, Franklin, and Halifax County Commissions requested exemption from the rules for traditional family farms and livestock operations. The Beaufort County Commission requested that the EMC postpone rulemaking until the Neuse rules are proven, it questioned the fiscal analysis, and it agreed to request funding from the General Assembly if rules are adopted. Several state commissions provided input. The Coastal Resources Commission adopted a resolution supporting the rules as proposed and temporary buffer rules. The Marine Fisheries Commission …

The final comment period was extended to October 15 to provide as much additional time as was available within the current rule-making schedule for those affected by Hurricanes Dennis and Floyd. A number of commenters felt that the hurricanes' devastation called for delaying adoption of rules to allow basin residents time to recover financially, while others felt that the rule-making addresses long-term issues that need to be addressed despite the hurricanes' impacts.

Additional Public Comments on the Buffer Rules (not reviewed during October 28, 1999 Hearing Officers' Meeting)

- The objective of the buffer rules is too narrow; the state should recognize and protect streams and their buffers for the numerous functions they perform, not just sediment and nutrient reduction.
  A more holistic approach to resource protection is certainly a desirable goal. The NSW classification provides the EMC with authority to address activities associated with nutrient loading. Other legislation provides the EMC with authority to address other water quality issues, but probably not habitat issues per se. For example, authority for such action may be found in the Clean Water Responsibility Act of 1997 (HB 515), where it amends G.S. 143B-282 by adding a new section (d) authorizing the EMC to adopt rules for point and nonpoint sources to meet water quality standards. Other authority may also exist in G.S. 143-214.7, authorizing the EMC to conduct statewide stormwater planning.

- Why is limited mechanized equipment allowed in buffers under the agriculture rule for selective cutting of trees, (h)(5)(B), but not under the forestry provisions of the buffer protection rule?
  The allowance in the agriculture rule was unintentionally retained from an earlier version, and does not exist in the Neuse agriculture rule. The buffer protection rule provisions are the result of extensive review by a stakeholder committee. The Hearing Officers will be asked to remove the allowance in the agriculture rule for mechanized equipment when they review the agriculture rule comments.

- Agency addresses given in (7)(b) and (8)(d) of the mitigation rule need to be updated.
  Addresses in sections (7)(b), (8)(c)(xii)(D), and (8)(c)(xii)(F) have been updated.

- Forestry provisions require leaving trees with roots growing in the stream. These will be the first trees that are wind-thrown after the adjacent timber is removed. To protect the stream, these trees should be harvested.
  This language was agreed to by the Neuse buffer rule stakeholder committee.

- Should "surface water" be defined? It is used to define starting points for measuring under (4).
  A search of state statutes and rules found a definition of surface waters in 15A NCAC 2H .0203. This definition of surface waters was added to the rule text as a new (2)(m): 'Surface waters' means all waters of the state as defined in G.S. 143-212 except underground waters.

- Whether a stream should be included under the rule should be based on ground truthing, because the maps are often wrong. Besides, if the USGS and the soil survey maps don't compare, one must be wrong.
  The Neuse buffer stakeholder committee agreed to the use of USGS maps and soil surveys after extensive discussion. A major consideration was the desire for predictability and allowing the regulated public to be able to determine in advance whether features on their property would fall under the rule without having to obtain agency approval. The two reference sources may not compare because soil surveys are done with ground truthing and often at a finer scale than the USGS topographic maps. This doesn't make the USGS map wrong, but rather the soil survey is typically a finer instrument for identifying streams.

Hearing Officers,
Two documents follow on proposed riparian buffer protection rules for the Tar-Pamlico and Neuse basins. The document below is a summary of comments received during the public comment periods. It includes staff's responses, with proposed language changes as needed. Comments are grouped in two subject areas, then ordered in staff's opinion of descending priority.

The second document is the text of the buffer protection rule with a number of proposed changes. These changes are the result of meetings with DWQ's Neuse rule implementation staff. Virtually all of these proposed changes result from staff's perceived need to clarify intent for implementation purposes.

Some of the recommendations in the first document overlap with implementation staff's recommendations, but not all of the changes below have been incorporated in the rule text.

We will mail you general public comments on the need for rules and information we have discussed with you next Monday, the25th, by overnight. Thanks for your patience.

-Rich Gannon

Comments Received on Proposed Riparian Buffer Protection Rules for Tar-Pamlico and Neuse River Basins
Aug 1, 1999 – October 15, 1999

Fairness/Impact of Rule

1. The rule will require fencing cattle out of streams, which will put cattlemen out of business.
The rule contains no language requiring fencing nor any intent to require it. The footprint of ongoing agricultural activities is exempt – (3)(b)(i). Conflicting language that prohibits removal of additional vegetation or disturbance of surface waters to remain exempt will be changed to agree with the exemption for ongoing cattle operations. See response to question 7 below.

2. The rule won't allow cattle crossings, which denies use of the land.
The rule contains no language prohibiting cattle crossings nor any intent to prohibit them. Conflicting language will be made consistent with this intent (see response to question 7 below).

3. The rule's forestry provisions provide adequate water quality protection. Loading from properly managed forests is essentially at background levels.

Rule Content

4. The rule reflects a complex balance among competing interests; the EMC should carefully consider the necessity and value of any revisions.

The Hearing Officers fully appreciate the balance of interests, and will attempt to limit changes to those needed to clarify implementation and those addressing issues not considered by the stakeholder committee.

5. Farmers must be allowed to continue current activities in the buffer, including stream crossings.

Agreed. Please see response to 1 and 2 above.

6. Exemption language for ongoing uses prohibits removal of any "additional vegetation" and "disturbance of surface waters"; this will prohibit use of buffers by cattle and is unreasonable.

Agreed. Possible alternative language[(3)(b)(i)] – "... Activities necessary to maintain uses are allowed provided that no additional <u>woody</u> vegetation is removed from zone 1, <u>and</u> existing diffuse flow is maintained. ~~, and surface waters are not disturbed".~~

7. The exemption for ongoing uses is limited to "the footprint of the existing use"; this is unclear regarding buffer use by cattle. Please clarify to allow cattle in buffers.

The language[(3)(b)(i)] reads, "Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from this rule". Staff feels that the language is fairly clear. Possible replacement language – <u>"This exemption is limited to the areal extent of the existing use within the buffer</u>".

8. The exemption for existing uses is lost when such uses are converted to other uses. An existing use is considered converted to another use when "an agricultural operation within the riparian buffer is taken out of production"; this language would mandate buffer establishment on land that is rested but stays under agricultural use. Agricultural land is often rested for a time, then returned to production as part of an inter-generational transfer, while looking for a lessee, or as part of a cost shared BMP. Resting land benefits water quality and should not be discouraged. Language should be added to allow for resting or conservation of land without losing exemption status.

The existing language implies an intent not to allow inactive land to remain exempt. If the suggested change is to be considered, possible alternative language [(3)(b)(ii)(B)] – "An agricultural operation within the riparian buffer is ~~taken out of production.~~ <u>converted to a non-agricultural use</u>". This language would also exempt production land placed in buffer under the agriculture rule.

9. It is unclear whether the creation of a new instream pond on an ongoing agricultural operation calls for a buffer; is this exempt under (3)(b) or does it fall under ponds in the table of uses? If instream ponds remove nutrients, why should a farmer be penalized with new buffer requirements for installing one?

Current interpretation of the Neuse buffer rule is that new ponds in drainage ways, under agricultural as well as other uses, require buffers or buffer mitigation, per the table of uses. ~~An alternative interpretation of the rule is that new ponds, provided they fall within the~~

footprint of an existing, ongoing agricultural use, are exempt. This latter interpretation would require a change to the "taken out of production" definition of a change in use [(3)(b)(ii)(B)] to be consistent, since a pond would take land out of production. Possible language – see response to question 9 above.

10. The rule needs to state a basis for reviewing appeals of variance decisions for local Boards of Adjustments to use.

The minor variance process allows property owners to object to variance decisions made by the Division or delegated local authorities. In the latter case, applicants request such appeals from local Boards of Adjustment. The rule sets three requirements for evaluating variance requests [(9)(a)]. As the rule is currently structured, Boards of Adjustment would use these criteria to make appeal decisions.

More specific criteria could be established to better guide both minor variance decisions made by DWQ or local Boards, and major variance decisions made by the EMC. For example, the Water Supply model ordinance provides five conditions that must be met to find that there are practical difficulties or unnecessary hardships (Section 507, p.21):

> *1. If the appellant complies with the provisions of this Rule, he can secure no reasonable return from, nor make reasonable use of, his property. Merely proving that the variance would permit a greater profit from the property will not be considered adequate justification for a variance. Moreover, the Division or the delegated local authority shall consider whether the variance is the minimum possible deviation from the terms of this Rule that will make reasonable use of the property possible.*
>
> *2. The hardship results from application of this Rule to the property rather than from other factors such as deed restrictions or other hardship.*
>
> *3. The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, which is different from that of neighboring property.*
>
> *4. The appellant did not cause the hardship by knowingly or unknowingly violating this Rule, or by purchasing the property after the effective date of this Rule, and then requesting an appeal.*
>
> *5. The hardship is peculiar to the appellant's property, rather than the result of conditions that are widespread. If other properties are equally subject to the hardship created in the restriction, then granting a variance would be a special privilege denied to others, and would not promote equal justice.*

11. To protect streams, adjacent trees need to be harvested – otherwise, wind throws occur. The rule needs to encourage young stands in the buffer.

The concern related to wind throws was not stated. However, the forestry provisions (11), which are the result of extensive debate by the Neuse stakeholder committee, allow substantial tree harvesting in zone 1 and full harvesting in zone 2. The rule, in essence, allows for maintaining relatively young stands. Provisions also exist for health and safety concerns, and streambank restoration is also allowed. There is no provision allowing removal of fallen trees that impede stream flows; such a provision could be added under (11)(a) or in the table of uses under Protection of existing structures, etc.

12. The definition of a high value tree mixes wood types (hardwood and pine) with ecosystem setting (wetland species). This is confusing.
In (2)(g), the term "wetland species" is designed to imply not physical location, but scientifically recognized hydrophytic tree species. The term was included to capture non-hardwood (e.g., cypress, eastern white cedar, tupelo) wetland species in addition to hardwoods. However, the definition uses a disjunction – or - where a conjunction would be more appropriate. Staff recommends the wording be changed as follows, "... and for hardwoods ~~or~~ and all wetland species, ...".

good

13. Do roadside ditches fall under the rule? If so, adjacent private property owners would be penalized for DOT ditches.
Per (3), the rule applies to streams, lakes, ponds, and estuaries. Per (3)(a)(i), "Ditches and manmade conveyances other than modified natural streams" are exempt. The vast majority of roadside ditches would be exempt.

14. The rule prohibits ditch maintenance; unreasonable.
Since manmade ditches are exempt (see 11 above), maintenance of existing ditches is also exempt. New ditches are subject to requirements listed in the table of uses under drainage ditches.

15. Existing drainage ditches (table p.26) should not be exempt; major loophole.
The Neuse stakeholder committee agreed to this requirement.
Mitigation provisions allow use of proceeds for restoring ditches.

16. The rule should include provisions for ditch management that would apply to forestry.
Since manmade ditches are exempt (see 11 above), maintenance of existing ditches is also exempt. New ditches are subject to requirements listed in the table of uses under drainage ditches.

17. The rule should not be expanded from its earlier "forest vegetation" focus to all vegetation.
The Neuse stakeholder committee produced this change.

18. Measurement of the buffer width should begin at the landward limit of all wetlands.
The Neuse stakeholder committee decided that the rule would not result in "buffering the buffers".

19. An earlier version of the rule exempted agriculture from the buffer rule if ag activities complied with the ag rule; this should be reinstated.
The rule exempts the footprint of ongoing agricultural activities, regardless of changes made in those areas to comply with the agriculture rule. ~~The intent is that inactive agricultural land would be subject to the buffer rule.~~

20. The rule should include an exemption for small impacts to allow farmers to conduct minimally impacting activities.
This proposal was considered and not incorporated by the Neuse stakeholder committee.

21. Forested buffers adjacent to forested tracts of land should be exempt from the rule.
~~***The logic of this proposal is not apparent.***~~ Forestry provisions were subject to extensive debate & resol'n
22. If buffers must be fenced, access will be blocked for horse riders and 4-wheelers; unreasonable.

There is no requirement to fence buffers – please see response to 1 above. 4-wheelers could cause impacts counter to the intent of the rule; property owners would be responsible for exercising judgment in this regard.

- Harvesting of old trees should be allowed in the first 10 feet adjacent to the surface water.
  The buffer protection rule does allow harvesting of individual high value trees in the first 10 feet of Zone 1 under (11)(b)(4).

- Requirements for manual removal of trees from zone 1 will increase fatal accidents in the woods.
  Forest management interest groups participated in the Neuse buffer stakeholder meetings and agreed to the language proposed. They did not forward such a safety concern.

- Requirements to leave timber in the buffer are a taking without compensation. The state should purchase this timber.
  While the proposed rule does not allow unlimited timber removal, substantial harvesting is allowed, as well as other uses of the buffer. Therefore, DWQ does not believe that the proposed restrictions would constitute a "taking".

Follow-up on Buffer Rule Issues from October 28, 1999 Meeting

- The rule needs to state a basis for reviewing appeals of variance decisions for local Boards of Adjustments to use.

  Staff consulted with John Dorney, who was agreeable to adding the following criteria in the buffer rule under (9)(a)(i) to further define "practical difficulties or unnecessary hardships":

  1. If the appellant complies with the provisions of this Rule, he can secure no reasonable return from, nor make reasonable use of, his property. Merely proving that the variance would permit a greater profit from the property will not be considered adequate justification for a variance. Moreover, the Division or the delegated local authority shall consider whether the variance is the minimum possible deviation from the terms of this Rule that will make reasonable use of the property possible.

  2. The hardship results from application of this Rule to the property rather than from other factors such as deed restrictions or other hardship.

  3. The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, which is different from that of neighboring property.

  4. The appellant did not cause the hardship by knowingly or unknowingly violating this Rule, or by purchasing the property after the effective date of this Rule, and then requesting an appeal.

  5. The hardship is ~~peculiar~~ unique to the appellant's property, rather than the result of conditions that are widespread. If other properties are equally subject to the hardship created in the restriction, then granting a variance would be a special privilege denied to others, and would not promote equal justice.

General Comments

Rule-Making Process, Fairness

- The state should *extend* the comment period to 12/31/99. People are consumed with survival issues from the devastating floods.
  The Hearing Officers recognized the impacts of the hurricanes on eastern North Carolina and agreed to do extend the comment period.

- The state should *delay* rule-making indefinitely for the following reasons:
  - The Neuse rules should be allowed time to work, to prove themselves and provide lessons before the same rules are placed on another basin.
  - Agricultural field staff will be diverted for months to years responding to the flood impacts.
  - Agriculture is suffering in several ways: historically low commodity prices, animal regulations, and tobacco base reductions. Now the hurricanes have destroyed not only this year's crop, but buildings, equipment, breeding stock, and other capital investments.
  - Publicity for the rule-making was poor. It should include: posters/fliers at feed stores, county Extension offices, post offices, etc, and information in all major regional agricultural publications, local newspapers, radio, and TV.
  - Adequate accounting tools do not exist.
  - The science is not there to develop accounting tools in the Neuse, and the Tar has even more requirements than the Neuse (phosphorus).
  - Per the Tar-Pamlico Basinwide Plan, DWQ doesn't know specific causes and sources of pollution, hasn't quantified agricultural BMPs installed under various programs or independently, cannot target specific streams due to scarce data, and doesn't have a good tool to determine allowable loads to the Neuse estuary.

- The stakeholder process was important and fair, the draft rules are the products of consensus teams reflecting all interests, and their recommendations should be upheld.

- The stakeholder process had problems: a very short timeframe, a misimpression that if the stakeholders didn't reach consensus, then DWQ would make the rules (I didn't realize the team could recommend more research instead). The stakeholders weren't listened to.

- The state is trying to get rules through without the knowledge of agriculture and the public.

Need for Rules

- The EMC should *re-examine the need* for rules in the Tar-Pamlico basin in light of the following:
  - A need has not been demonstrated; the state lacks adequate data to support this action.
  - The Tar-Pamlico basin has not evidenced the same problems as the Neuse basin.
  - The Pamlico estuary showed improvement in the most recent DWQ Basinwide Plan. Why did staff conclude that the voluntary program wasn't working?
  - Crab harvests have increased since 1978, grass beds are much larger, healthier.
  - According to many commercial fishermen, the frequency of fish kills now is no greater than in their working past.
  - More research is needed. The rules are not based on sound science. DWQ data is not credible:
    - The N load allocation pie is flawed; it is based on acreage, not land use. It also gives agriculture a black eye.

- Point source load reduction estimates are weak science, lumping N and P is flawed.
- DWQ acknowledged that the urban nitrogen contribution is an underestimate.
- Why base rules on 1991 levels – only one year? How do current levels compare? How can we know that changes are needed when we don't know current nutrient levels?
- Basing rules on models and other best guess techniques is inappropriate; we need repeated measurements over time.

  - Agriculture is making progress under the voluntary plan, and shouldn't be penalized for it. DSWC data show greater progress than DWQ data.
  - DWQ staff recommended continuing the voluntary plan.

- The rules are badly needed and should be adopted expeditiously for several reasons:
  - We cannot ever expect the estuary to support its uses without mandatory measures.
  - The rules are a major, necessary step toward achieving NSW and Basinwide goals.
  - The hurricanes' impacts will be with us for some time, but those impacts don't change the need for these long-term measures to address ongoing degradation of the river.
  - No reasonable buffers could mitigate the impacts from Floyd and other hurricanes, but buffers are critical for mitigating the effects of most smaller events. The buffer rules are needed.
  - Temporary buffer rules are needed to preclude unnecessary clearing and other impacts to buffers.
  - The state has every right and responsibility to control the reckless use of land by landowners, farmers, developers, and municipalities that results in degraded public resources. The state has been too gentle and slow in protecting its waters because of perennial delaying tactics by those who exploit the land and resources. It is time to implement these mild attempts at NPS control.
  - Since the Marine Fisheries Commission declared the Pamlico River commercially dead in 1989, point sources have made progress, but nonpoint sources have made little.

- All of the rules should be enacted as temporary rules.

- Water quality data shows a need for rules:
  - Per USGS Circular 1157, nitrogen and phosphorus concentrations have decreased in all four Albemarle-Pamlico drainage basins since 1980, however, concentrations are still high enough in the Tar-Pamlico and Neuse Rivers to cause nuisance algal growths. A 30% reduction in summertime N and P in the Tar River would be needed to attain literature-based guidelines to reduce the incidence of nuisance algal blooms and fish kills.
  - The Basinwide Plan notes water quality improvement since the first cycle. However, a review of the data suggests that this assessment is uncertain at best. For freshwater segments, the Plan makes clear that the improvements seen are likely due to low flows during the 1997 sampling efforts. Improvements in the estuarine segments are qualified by a reduced quantity of data for algal blooms, chlorophyll a, and fish kills relative to the first cycle. One thing is clear from the Plan and its supporting Assessment document – there is no evidence that nonpoint source pollution has decreased in the basin since the first cycle.
  - The state must develop a TMDL for nitrogen for the Tar-Pamlico basin, and should follow the Neuse example by adopting rules no weaker than those in the Neuse.

- There's too much conflicting data to support a clear need for these rules:
  - DWQ's 3rd annual report says atmospheric deposition may be 42% of nitrogen inputs – this doesn't agree with USGS Circular 1157, which says atmospheric input is 20 to 30% of nitrogen in all four A-P basins, and doesn't agree with DWQ's number at the hearings (1.1%).

- DWQ says 67% of N runoff is from farmland. But USGS Circular 1157 says permitted point sources make up over 40% of instream nitrogen.
- Farmers are being blamed for nutrient inputs from non-agricultural sources. Point source loading estimates don't include failing waste treatment systems, and onsite wastewater inputs and failures are not counted in loading allocations.

Alternative Actions, Other Sources

- The state should make a serious effort under a voluntary approach. It should:
  - Engage industry groups, and look at other voluntary agricultural programs like Tampa Bay.
  - Request resources for long-term monitoring.

- Onsite wastewater:
  - Onsite wastewater is not identified as a source, yet according to the Rural Economic Development Center, 80% of systems on the coast are prone to failure. This source needs to be quantified. EPA has also identified these systems as a problem.
  - There has been a many-fold increase in septic systems in the last 15 years, and growth that relies on septic systems is increasing, yet their inputs are attributed to agriculture.
  - The NC Dept. of Commerce reported that in some counties "up to 23% of septic tanks have waste water discharge problems that lead to surface water pollution". These are a major source of pollution and their management should be included in the rules.

- Municipal wastewater:
  - City wastewater treatment plants overspill after every rain and discharge raw waste, but these loads are not counted in their portion of nutrient loads to the estuary.
  - Per USGS Circular 1157, point sources may be 6% of nitrogen inputs, but may equal 40% of instream N loads.
  - The EMC should precisely determine progress made by point sources. Information provided in the public hearings was not convincing that they have done their share.

- The EMC should not only adopt the rules proposed here, but also those recommended by the other stakeholder teams. The EMC should also address sprawl.

- Since the Tar-Pamlico River system is an integral part of a set of complex and interdependent coastal ecosystems, similar protections must be extended to all of our coastal drainage systems.

- For a fair discussion, the costs to the public of nutrient impacts to public trust waters need to be quantified; the fiscal note only quantifies one side of the costs. What about costs of inaction to the taxpayers, commercial outdoor recreational interests, the seafood industry, coastal tourism, etc?

- Wild coastal birds contribute large amounts of nutrients to the estuary from coastal lakes in annual cycles, e.g. coming down the Pungo River. The state could achieve significant nutrient reductions by installing marshes at the outfalls of these lakes. Use of harvestable plants in these marshes could recoup or make money for the state.

- Forestry BMPs should also be mandatory.

- At-large EMC members should be selected from an agricultural background. The EMC should be more in tune with rural North Carolina.

- An 800 number to report water quality violations would be useful.

Rules Content

- The rules need to explicitly establish the 30% N reduction and holding P goals in rule language.
  Goals are described for each rule in its opening purpose statement. In the agriculture rule, wording is explicit. The buffer rule explicitly states a purpose of maintaining buffers' nutrient removal functions. The nutrient management and stormwater rule purposes would be better worded as follows. Nutrient Management - (a) PURPOSE. The two primary purposes of this Rule are: to ~~reduce the~~ contribute to a 30 percent reduction from 1991 levels of nitrogen loading to the Pamlico estuary due to fertilization activities in the basin and to ~~maintain the~~ contribute to capping of phosphorus loading to the Pamlico estuary at 1991 levels ~~resulting~~ from fertilizer application. ~~Achievement of~~ these objectives ~~will be measured based on 1991 loading levels and~~ are to be achieved within five years from the effective date of this Rule.

  Stormwater - (a) PURPOSE. The purpose of this Rule is to achieve a 30 percent reduction in ~~nutrient~~ nitrogen loading from existing and new developments relative to 1991 levels, and to cap phosphorus loading from these developments at 1991 levels. The purpose of this Rule is also to provide control for peak flows in new development to ensure that the functions of existing riparian buffers and streams are not compromised by channel erosion.

- Land areas closer to the estuary should be more heavily regulated than those further away since more of what they contribute gets to the estuary.
  Language will be added to the rule providing the BOC the option of unevenly allocating the 30% goal among counties. Please ~~also~~ see the response to the question below under Rule Content – Committees.

- The rules should call for a 50% nitrogen reduction; that way, a 30% reduction may be achieved.
  Progress under the rules will be assessed using real-time, land-based measures as well as longer-term, instream measures. If basin water quality goals are not being achieved in the future, managers can draw from both measures to guide decisions.

Implementation Issues

- The EMC should ensure adequate DWQ enforcement staff and erosion control personnel.

Nutrient Management

Rule Content

- Homeowners must be included in the rule and educated. They are the worst overfertilizers. Include all residential landowners that own land within 500 yards of surface waters.
  While this is a worthwhile goal, the challenge with including all homeowners would be the immense resource demands that would be required to carry out training for all homeowners who choose that option, and for compliance monitoring on all who don't choose that option. An alternative would be to require all local governments to conduct education programs for residents and workers within their portions of the basin. The stormwater rule could be modified to include such a requirement applicable to all local governments in the basin.

- Adopt Alternative 2. Do not use a 50-acre threshold. All farmers, including greenhouses, should be included in the rule. A threshold for greenhouses might be one-half to one acre.
  The hearing officers will recommend that the EMC adopt alternative 2, which does not include any acreage threshold for agricultural lands.

- Golf courses need to be required to have plans in place, not just attend training.
- The rule should require implementation, not just training, since some people will not put their training to use.
  DWQ staff believes that people who attend the training will recognize the value, including the economic benefit, of proper nutrient management, and will voluntarily adopt such practices. For this reason, the option was provided not only to golf course applicators, but to all land uses.

- Will the rule apply to every worker under a farm manager? This would be burdensome.
  Only to those workers who apply fertilizer to the managed lands. To minimize any burden, owners and managers have 3 options for ensuring compliance – ensuring that applicators have completed training or completed a plan, or ensuring that applicators follow plans completed by the owner or manager.

- Add the following to (d)(3): Persons who fail to sign up or to obtain the nutrient management certificate within the required timeframes, or who are found by the Director to have knowingly exceeded nutrient management standards and specifications, shall be required to develop and properly implement nutrient management plans pursuant to item (e).
  This is a useful suggestion. The following language was added to this clause - , or who are found by the Director to have knowingly exceeded sound nutrient management recommendations,

- The rule should apply to highways, golf courses, and gardens.
  The rule does apply to these uses. Residential gardens would be covered under modifications to the stormwater rule described in the first response under the Nutrient Management rule above.

Urban Stormwater

Rule Content

Applicability

- All local governments in the basin should be required to educate residents, not just those over thresholds. One possibility would be for smaller local governments to help fund basinwide stormwater educator positions to work with all local jurisdictions.
  Many comments were also received in favor of including homeowners under the nutrient management rule requirements. While staff feels that resource requirements for such a step would be insupportable, expanding education requirements under the stormwater rule to all local governments could be an option. We assume that such a step would constitute a significant change to the rule, requiring re-hearing. Several studies shed light on the question of the need for such a change, the most applicable done recently by NCSU CES in the Neuse Basin. This and other studies suggest that while some over-application occurs in residential areas, it is not at a large scale.

- Total population per county does not necessarily equate to urban population. To better capture development impacts, the county thresholds should instead be based on population density.
  This is a valid concern. The stormwater stakeholders considered a number of approaches for designating local governments, but did not look at population density in the counties. One factor was whether a county contained a designated municipality; if so, designation of the city without designating the county might force new development outside city limits, encouraging sprawl and defeating the purposes of the rule. However, staff will develop county density numbers to address whether a different mix of counties may be merited.

- All counties and municipalities should be included in the stormwater rule.
  The stormwater stakeholders felt that the Neuse approach of designating local governments that encompass most of the basin population would capture an even greater percentage of the area that currently generates stormwater runoff and is likely to in the future. The stakeholders estimated that the 6 municipalities designated in the rule comprised about 79% of the basin's municipal population, and that the municipalities together with the 6 designated counties included about 83% of the total basin population.

Load Reduction Requirements

- The lack of reduction requirements for existing development is a serious weakness of the rule. The 30% goal cannot be achieved without addressing existing development. Requirements for new development and the buffer rule only hold the line against further increases in nutrient loading.
- Language should be added to the rule requiring municipalities to develop and implement a plan to achieve the nutrient goals using treatment of existing development, public education, restoration, and other activities.
  The stormwater stakeholders recognized the contribution of existing development to urban stormwater nutrient loads, but could not reach consensus on whether or how to obtain reductions from existing development. Therefore, the rules reflect the approach used in the Neuse basin. Public education and illicit discharge removal programs are proposed tools in the rule that would yield some load reductions from existing developed areas.

Experience in other areas suggests that retrofitting is a very expensive method of achieving reductions. Finding suitable retrofit sites can also be challenging. If the EMC wishes to address existing development, one possible approach would be to call on local governments to include in their required programs long-range plans for addressing it beyond simply identifying retrofit sites. Such plans could include requiring a certain percentage of developed area being treated at certain time intervals, such as 5 years. Provision could be included to allow credit for restoration elsewhere on the same waterbody. Any such additions would likely constitute significant changes to the rule, requiring re-hearing.

- Best available technology will not allow high-impervious developments to meet reduction requirements without sacrificing most of the development to treatment. Options are needed.
  In the Neuse basin, developers were given the option of partially offsetting load increases by paying for wetland restoration through the NC Wetlands Restoration Program. This option was not available in the Tar-Pamlico basin. One alternative would be to allow developers to mitigate load increases off-site, by treating existing developed areas.

- The public education program, (c)(2), should inform developers about all new development requirements, not just nitrogen load reduction requirements; i.e., strike the (A) in the reference to part (c)(1)(A) above.
  This error has been corrected in the rule.

- A sub-group of the Neuse Basin stormwater model plan stakeholders has several issues that they would like to pass on to the Tar-Pamlico rule-making process. Four major issues are detailed below – 1) Concerns with the pre/post peak flow match requirement, 2) inability to use regional controls, 3) uneven applicability of rules, and 4) lack of targeting of mitigation funds. Their report to the EMC is provided here:

  Neuse Stormwater Stakeholder group concerns regarding the rules themselves.

  During the development of the Model Stormwater Plan, the Stakeholder group identified several issues that involved the rules themselves and as such were beyond the scope of the group. However, the Stakeholder group felt these issues were important enough for them to be brought to the EMC as a separate item for the their consideration. It is recommended that a work group be established to thoroughly investigate these concerns and make recommendations back to the EMC for their consideration. The stakeholders agree to participate in these efforts.

  1. Concerns with the 1yr / 24 hour peak runoff requirement.

  Many of the stakeholders are extremely concerned with the implementation of the 1 year-24 hour pre-development runoff portion of the rules. The group understands that this was included in the rules in an attempt to protect local streams from bank erosion and resulting loss of buffer width and effectiveness. However, introduction of this apparently simple peak flow requirement, to what is primarily a nutrient reduction plan, may result in numerous far reaching implications for those responsible for compliance. These include;

  - Lack of accounting for detention routing and possible aggravation of downstream flooding due to coinciding peak flows. Detention may actually increase flooding by delaying release of flows to coincide with peaks from upstream.

- Potential increased streambank erosion due to sustained bank full flows. There are two schools of thought on the primary causes of stream bank erosion. Current opinion favors the theory that duration of bank full flow is the primary consideration for stream bank erosion (as opposed to peak flows). If this is correct, then detention associated with this requirement may actually increase streambank erosion instead of reducing it.
- Maintenance and enforcement difficulties on individual residential lots. Many communities have found it difficult to insure the maintenance of stormwater controls on residential properties. In addition, it is often difficult to take enforcement action in residential development where responsibility typically falls on homeowners associations.
- Maintenance and inspection difficulties caused by the multitudes of small on-site controls which will result from this particular regulation.
- Creation of an excessive regulatory burden. Local communities recognize that only new development sites that choose to utilize BMP's to control nitrogen will require additional staff review and long term inspection. In contrast, the 1 yr. 24 hour requirement applies to every site and will require engineered controls in all cases. This means that every new development and building permit will have to have review of design calculations, flood routing modeling, site plan layouts, preliminary and final construction drawings, prepare operational and maintenance agreements with property owners, and obtain sureties (perpetual bond, letter of credit, etc.) for continued O&M of the controls. This is an excessive regulatory burden.
- Liability issues associated with privately owned stormwater controls
- Smaller on-site controls becoming public nuisances (also known as mosquito holes) with associated aesthetic and health concerns.
- Limitation created by this requirement in regard to regulating flows from upstream and downstream areas differently. Basic flood control design supports holding back upstream flows while downstream flows are released quickly in order to avoid coinciding flow peaks.

While the Stakeholders recognize that stormwater detention can be a valuable tool for controlling runoff and protecting streams, we also believe that it is clearly inappropriate to reduce this difficult issue to a "one-size fits all" requirement attached as a "rider" to the Neuse Rules. Peak stormwater control (also known as peak discharge control) and the multitude of variables involved are issues that have been analyzed, discussed and agonized over for more than 20 years with no clear universal solution. This is a complex issue that will require development of community specific or even stream specific stormwater control requirements.

2. Severe limitations on the use of regional controls including both multi-site and intergovernmental applications.

Many of the Stakeholders firmly believe that regional controls are the most cost effective way of controlling nutrients and other pollution and as such, are a critical element of a comprehensive stormwater management plan which may include both on-site and regional controls. Regional controls have demonstrated benefits for both new development and more importantly for existing development through retrofits (especially in the piedmont and mountain regions where the use of BMP's based on infiltration is severely limited). However, it has become uncomfortably apparent that both the Neuse Stormwater regulations and Riparian Buffer Rules, as well as other state regulations, severely limit the use of regional practices.

For example, the pre-development runoff portion of the rules currently requires on-site controls. This would essentially force the use of a combined on-site control for nutrients as well. The only alternative would be the installation of 2 separate BMP's for each development site. One on-site control, to satisfy the peak runoff portion of the rules, and a separate regional control, to satisfy the Nitrogen removal requirement. The use of separate BMP's for peak runoff control and nutrient controls would be cost prohibitive in most cases and inefficient in all cases. In addition, the existing buffer rules compel the use of on-site controls by requiring that all flow must pass through the buffer as sheet flow or be captured (on-site) to be treated before being released to the stream.

3. Lack of universal application of these rules resulting in serious inequities.

- The current application of the Neuse rules is based exclusively on a jurisdiction's population. The Stakeholders believe that it would be far more meaningful to base application of the stormwater portion of the rules on development density or some other criteria associated with the level and rate of urbanization as well as proximity to the estuary.
- Application of the rules to counties, while exempting more urban municipalities located within these same counties, is both ineffective and inequitable and makes compliance difficult.
- Growth in the portion of jurisdictions regulated by counties is generally limited to low density residential development which has limited pollution impact.
- Most appropriate retrofit sites are located within municipalities that counties have no control over.
- The additional development costs associated with these rules will push development towards exempt communities thereby defeating their purpose.

4. Mitigation funds are not targeted. There was a mixture of opinions as to where the money received for the purchase of nitrogen credits should be spent. Some believed the rules should require the money to be spent locally (to the extent practical) while others believed that more "bang for the buck" could be achieved if the money were spent where pollutant loads are higher and the cost of establishing BMP's is lower. The group understands that the stated policy of the NC Wetland Restoration Program (WRP) is to utilize funds where they are collected, to the extent practical, as consistent with the WRP's Basinwide Wetland & Riparian Restoration Plans (as long as they can obtain the cooperation of the local government). The WRP tracks all receipts and disbursements and reports this information in the WRP's Annual Report. The Annual Report will be made available for communities to review at the WRP's web site by December of each year.

- Nash County has the following questions that deal largely with how these rules will interface with NPDES Phase II and existing watershed rules, and enforcement:

1. What is most effective and economical BMP in the long run - low density with riparian buffers or higher density with buffers and engineered storm water controls? Are there estimates on cost of inspecting these structures on annual basis? Can developers or property homeowner associations be required to submit own inspection reports by certified inspector, e.g., professional engineer or landscape architect? What guarantee should the local government require of developers and property/homeowners associations - bonds? In what amount? What happens if the developer or homeowners default? Should the amount of guarantee be tied to an annual percent increase? Any history on the success rate of this type of guarantee?

2. What about the use of retention ponds built and maintained on a regional basis rather than a project-by-project basis? Do the Neuse and Tar-Pam rules actually discourage this method? Are there municipalities/counties using this method? What rate of success have they experienced? What are the initial cost and what size drainage area is most beneficial?

3. Will construction of utilities within Zone 1 be prohibitively expensive given the 3:1 mitigation ratio? Can there be options for assessing the impact on water quality versus construction cost that can be weighed in specific situations?

4. When will the buffer rules become effective?

5. What does the mapping requirement involve for counties that do not have underground storm water systems?

6. There is more than one method to calculate the impact of development on storm water runoff. How do we ascertain the best method, i.e., the method most likely to provide adequate pond storage size? Longevity? Low maintenance?

7. What methods are available for diverting stormwater away from surface water supplies? What types of development practices should we be looking for and how are these to be assessed as to impact? Will each local government be required to either have a certified professional on staff or on retainer to review every development plan?

8. What ideas are there for minimizing built-upon areas? How does a local government assess the impact of various impervious surface scenarios on the local water quality?

9. How can local governments make residential clustering a more viable, attractive development alternative? Is there research information available on the relative costs of this type of development versus traditional larger lot development that could be used to convince developers and homeowners of benefits?

10. How do you envision local governments enforcing maintenance of riparian buffers, especially with individual homeowners? Can it be done on a complaint basis only or are local governments expected to inspect each property annually? What enforcement mechanisms are there - is violation a misdemeanor punishable by a fine under NCGS 14-4? Can each day the violation continues be considered a separate offense?

11. How do the Neuse, Tar-Pamlico and NPDES Phase II Rules coincide? Has anyone looked at a single model ordinance that would encompass the requirements of all three water quality programs? Can rules be reviewed in light of water supply watershed protection rules as well?

12. How is nutrient reduction to be measured? How will the reduction be attributed to a single local government or even a single development? If the goal is not met, how do you target the guilty party and prove guilt? Is there a mechanism for punishment?

13. How do you envision local governments working together? Could you provide the framework for an interlocal agreement that could be used statewide to ensure that all pertinent issues are addressed?

14. Greensboro has cross-trained fire inspectors to spot illicit discharges. Can the state offer a cross-training program to which smaller local governments can send employees?

15. How does a local government assign responsibility for private road roadside ditches? Are these ditches assigned to adjacent property owners for maintenance and payment of utility fee if such fee is instituted? Is there legal precedence for this action, if necessary?

16. Who should be assigned duty to police nutrient management portion of program? Will agriculture agents be trained to handle this as well as rules specific to agriculture?

17. How does one ascertain that a stormwater management plan for new development keeps nitrogen loads from exceeding 4.0 lbs/acre/year; phosphorus 0.4 lbs/acre/year and that there is no net increase in peak flow from 1-year, 24-hour storm? Who will provide training, who will teach us?

18. How does a local government identify and prioritize opportunities to achieve nutrient reductions from developed areas?

19. Is the Riparian Buffer Restoration Fund run statewide? How does a local government ensure that fees collected are spent locally?

20. How does a local government police and follow logging operations? What BMPs will these operations be required to use? Does is require SE&C Plan?

21. Has the state performed a fiscal analysis to determine the financial impact of these rules on local governments?

22. Can public education be handled on a regional or statewide basis for economy of scale?

- How can cities be required to reduce nutrients relative to 1991 levels when you don't know what those levels were?

- Why not run the stormwater to wastewater treatment plants instead?

Implementation Issues

- It will be very difficult for local governments to enforce the rule; they lack adequate staff and expertise. Ultimately the local taxpayers pay.

- The state should administer and enforce this rule in rural counties. Otherwise, inadequately equipped personnel will, and the program will not work.

Agriculture

Rule-making Process

- The hurricanes have devastated farmers financially; rule-making needs to be postponed.
- DWQ staff should spend more time in the field.

Need for Rule

- The agriculture stakeholder team did not reach consensus that rules are needed for agriculture. It did reach consensus that if rules are to be made, then they should be as close as possible to the Neuse agriculture rule.
- Rules are premature; agriculture has made significant progress under the voluntary approach. In fact it has been the only source to show any progress. Agriculture may already meet the goal considering the following:
  - Under 1985 Farm Bill, all Highly Erodible Lands were put under erosion control plans.
  - Much of erosive land was planted to trees under CRP.
  - The dramatic shift from corn to cotton has reduced nitrogen fertilization 50%.
  - There has been a large increase in conservation tillage the last 5 years.
  - There has been more soil testing, more voluntary nutrient management.
  - Much ag land in the upper basin has gone to development = 100% decrease in agricultural nitrogen input.
- Other evidence indicates that agriculture rules are not needed:
  - According to the Basinwide meeting presentation, most streams in rural areas have improved.
  - USGS NAWQA sampling showed no measurable nitrate or below MCL in our well; it's safe.
  - The state lacks data showing horses and cattle operations to be a problem. Further research is needed before making rules.
  - Farmers would not foul the waterways that provide them with a sustainable living; farmers are environmentalists and stewards of the land.

Rule Fairness

- The agriculture rule is unfair and unwise for the following reasons:
  - It will require fencing cattle out of streams, which will put cattlemen out of business.
  - It will not allow cattle crossings, which will put cattlemen out of business.
  - It will require 50 foot buffers on all ditches, which will put farmers out of business.
  - Traditional, family farms with pasture operations will be hit the worst by the rules.
  - It will cause cattle farmers to fold and their land will be developed, causing greater nutrient inputs.
  - It will unfairly raise production costs relative to the rest of the country and the world.
  - It is more stringent than the Neuse rules - phosphorus limits, sheetflow requirements, and ditches are examples. Why? Because the political power is in the Neuse basin. Textbook example of incrementalism.
  - Proposed nutrient reductions would likely result in poor crops and low incomes. Our drainage district opposes such cuts below sound agronomic specifications.
  - The state wants farmers to apply 400 lb/ac nitrogen to grass they can't graze under the rules.
- The proposed rules inequitably burden agriculture for the following reasons:
  - Towns under 5,000 are exempt, counties under 10,000 are exempt, all state and federal property, all ongoing activities in city riparian areas, yards, and gardens.

- Per USGS Circular 1157, point sources may be 6% of nitrogen inputs, but may equal 40% of instream N loads. Yet DWQ allocates 78% of the problem to agriculture
- One percent of the population is being tagged with 99% of the clean-up.
- Developed areas pipe runoff straight into streams; they contribute more than agriculture.

- Our drainage district would be willing to install more water control structures if assisted by cost share.
- Agriculture rules are fair and provide flexibility to farmers.
- Proof is needed that the rules will work; this cannot be an experiment. In twenty years, we don't want to find out that the estimates were wrong and buffers don't really work.
- The new legislation that prompted these rules was handled badly; it makes farmers think that environmentalists are trying to put them out of business, and makes farmers unreceptive to green farming practices.

Alternatives to the Rule

- Voluntary progress should be better quantified before any rules are required.
  - Now that NLEW is complete, run it for the historical period, 1991 to present, to estimate progress, including non-cost-shared BMPs. If there has been at least a 20% reduction, then continue the voluntary plan.
- Agriculture rules should be tabled in favor of the following:
  - Give time for voluntary nutrient management to work; Districts are just getting out from under Farm Bill, followed by .0200 requirements, and are working to increase adoption of nutrient management, controlled drainage where suitable, and no till, which is on the rise.
  - Implement comprehensive, county-wide, voluntary nutrient management programs.
  - One option could be to establish a BOC and LACs to facilitate voluntary implementation and accounting.
  - The CREP program should be allowed to work before rules are mandated.
  - Strengthen education and cost share; make it an informed voluntary effort.
  - EMC should request SWCC to lift the ACSP requirement that Districts budget all 3 years of nutrient management out of one year's allocation.
  - Allow Districts time to address priorities in their annual strategy plans.
  - Look at successful voluntary programs, like Tampa Bay, Montana.
- A fiscal note is needed with true costs to the state, to local governments, and private citizens, including the costs to traditional family farm livestock producers.
  - The analysis done shows zero cost to DWQ, and ignores costs to sister state, federal, and local agencies.
  - It doesn't include planning costs for local agriculture agencies to develop plans and apply them. E.g., in Edgecombe County, if 80% of farmers choose option 1, it will require 1,920 plans. At 3 man-days per plan, that equals 3 man-yrs of time for planning. Then 6 man-yrs application time. This equals $300,000 in staff cost.
- Do buffers even work? How do we know?
- Kill off the deer, geese, and beaver instead of making the cows get off the land.

Rule Content

General

- Tar-Pamlico rules should be identical to Neuse rules; otherwise, they will be too confusing to farmers that straddle the basins. They should at least be no more stringent than the Neuse rules.

- The rules should not include provisions to limit phosphorus loading for several reasons. The state has yet to do the following:
  - Produce the science to identify sources of loading, to differentiate between natural and human-induced loading. Soils in the basin are inherently high in phosphorus.
  - Define a basin assimilative capacity for P.
  - Identify BMPs to limit P loading.
  - Establish a process to account for loading reductions.
  - It's too early to regulate phosphorus; federal policy is still evolving.

  Scientists who study North Carolina coastal systems have determined that while the estuaries are predominantly nitrogen-limited, they do at times show phosphorus limitation. They also caution that significant reductions in nitrogen loading without concomitant phosphorus reductions could cause ecosystem changes, including expansion of nuisance forms of algal growth, and that management actions need to recognize both nutrients and be adaptive. The EMC approved the current nitrogen and phosphorus goals as part of the NSW Phase II strategy in 1994 based on such research and input.

  Requirements for phosphorus control do not require differentiation of natural and anthropogenic instream P loads. Measurement of progress will be land-based, using baseline estimates of phosphorus inputs from the land in 1991 and reductions achieved through BMPs. While loading of soluble phosphorus from some agricultural lands is a recently identified and poorly understood issue as of yet, methods have existed for some time to quantify sediment-related phosphorus loading from various land uses, and reductions in that loading from BMP implementation. Under the agriculture rule, one task of the BOC will be to develop the specific accounting approach to be used for sediment-attached phosphorus.

  The agriculture stakeholder team discussed the soluble phosphorus issue at length with input from an NCSU faculty expert. The team agreed to add language to the rule requiring the BOC to establish a technical committee to monitor and report annually to the BOC and EMC on this issue, including the evolution of federal policy. The team also agreed to encourage local agriculture agencies to advocate site-specific soil phosphorus analysis and BMP implementation on a voluntary basis to address soluble phosphorus. In the meantime, the phosphorus loading goal remains, farmers are to implement BMPs to reduce nitrogen and sediment-attached phosphorus, and LACs are to quantify and track sediment-attached phosphorus loading reductions toward the goal.

- Farmers must choose whether to sign up before they know what the local option means; unfair.
  The local option is designed to provide the flexibility and local control that has been requested by the great majority of commenters from the agricultural community. As rule implementation occurs, and baseline and reduction estimates are developed, the BOC and LACs will be able to provide better estimates to farmers of what measures may be expected of them. The local option is not required to be more stringent than the standard BMPs, provided the local strategy achieves its loading goals.

- Instead of current option 2, a simple, reasonable, enforceable alternative would be a 15-foot border of perennial vegetation on all ditches, to be established over 5 years. NC State Technical Bulletin 311, 1997, describes research that shows that a 14-foot grass buffer reduces sediment 77% in Coastal Plain and 70% in Piedmont.

- No-till fields don't need buffers since no sediment loss occurs from them.

- Another BMP option should be no nitrogen application within 50 feet of streams.

- The rule references 15A NCAC 2B .0100 for certain definitions, but should provide them in the text, e.g. "natural drainage way" and "classified waters" in (g)(7)(A) and (C).

- The rules leave too much open to interpretation.

- There is plenty of flexibility in the agriculture rule, and adequate time to implement.

Applicability

- Pasture livestock operations:
  - Traditional family farms and livestock operations should be exempted for several reasons:
    - They have minimal nutrient impact and they preserve open space.
    - Pasture makes up a very small portion of the basin (fiscal note says 2%?).
    - The state lacks data showing horses and cattle operations to be a problem.
  - Pasture operations with a stocking density of less than or equal to two-thirds to one animal unit per acre should be exempt because they have no impact. For years, forage specialists have recommended a minimum of 1.5 acres of grassland per animal unit.

- How will the rule apply to people who take over existing operations after the effective date or to new operations?
  The rule applies to all persons engaged in agriculture in the basin. New operators are expected to be a very unusual circumstance. Nevertheless, the LACs are responsible under (m)(2)(D) for ensuring that any changes to the design of the local strategy will continue to meet loading goals. On assumed or new operations, new farmers could choose to continue existing practices or to use standard BMPs. New farms (those converted from other land uses) would affect the baseline loading and have to contribute to reductions as existing farms. The rule does not currently contain provisions for ensuring notification of rule requirements to new operators.

- Does the EMC intend for the agriculture rule to apply to all livestock and poultry operators, including backyard chicken coops (while existing subdivisions with hundreds of houses have no stormwater treatment requirements, no septic requirements, and no fertilizer requirements)?
  While the rule does not include a de minimus exemption or lower threshold, people with backyard chicken coops will be encouraged to sign up under their local strategy, with the intent that, if they truly make no nutrient contribution, the LAC will recognize their status and not require them to conduct any unwarranted activities.

- The rules are confusing. They lull farmers into a false belief that they are exempt when in truth they're only exempt from one part but not others. All agriculture rules should be in one section.

Buffer BMP – Livestock Use

- The rule should clarify that fencing will not automatically be required, for the following reasons:
  - Fencing costs would exceed benefits on most low-density cattle farms.
  - If fencing is required, cattle operations will be driven out of business.
  - If fencing is required, alternate shade and water would be required, which may be unreasonable.

- Pasture cattle farms need options. What about activities such as rotational grazing, alternate water and shade, moving feed, and how litter is applied? Can these be credited?

- In forested and vegetated riparian buffers, under (g)(6)(C) and (i)(3)(A), prohibiting "creation of any areas with bare soil" and any "loss of ground cover" would prohibit use of buffers by cattle; this is unreasonable. Consider requiring 80% ground cover, or minimizing bare soil.

- Requirement that forested riparian buffers be "established as undisturbed forest" would prohibit use of buffers by cattle; this is unreasonable. Also, what about deer paths, beaver disturbance, etc? Change to "minimally disturbed", or "minimally disturbed as is practical".

- In vegetated riparian buffers, requiring a "dense ground cover" and prohibiting "loss of ground cover" would prohibit use of buffers by cattle; this is unreasonable.

- To allow for cattle use of riparian buffers under allowable uses of both forested and vegetated riparian areas ((h)(5) or (i)(3)), please include language for "animal forage".

- Allow suitable grazing vegetation to be grown in buffers. Grazed riparian areas take up more nutrients than ungrazed.

- There is no language in the buffer BMP allowing cattle crossings. Stock crossings should be explicitly provided for under either exemptions (a la logging stream crossings, (g)(7)(F)) or under allowable activities, (h)(5), if they follow NRCS guidelines.

- Use wording other than "disturbed"; it sounds like farmers are doing something bad.

Buffer BMP - Applicability

- If a farmer puts in a pond, why should he have to buffer it? Ponds remove nutrients.
  If a farmer chooses the standard BMPs, and chooses buffers, the rule states that created ponds that are not part of a natural drainage way are exempt from buffering requirements. A pond that impounds a stream, then, requires a buffer. NCSU CES has recommended a "nutrient management pond" standard; this may satisfy concerns. OR Add instream ponds to exemption.

- Ponds have to be in streams so that water will be available in summer. Buffers shouldn't be mandatory on them.

- The agriculture buffer rule would regulate dry ditches; this is unreasonable.

- Exempt ponds and ditches altogether; they are BMPs historically.

- Inclusion of first-order ditches that drain directly to classified streams would put almost all of my field ditches under buffer requirements; this is unworkable.
  While this situation does not appear to be a common one, farmers that face this situation would likely find that choosing the standard BMP option and choosing to install buffers would be a costly approach. Farmers in such situations would likely benefit from considering the use of water control structures and nutrient management instead, or choosing the local strategy option and working with their LAC to develop a site-specific solution.

- Public roadside ditches should be specified as exempt or not. Otherwise, many landowners will be penalized with buffering them.

- Why aren't buffers that are created under the agriculture rule then exempt for agricultural purposes under the buffer protection rule's exemption for existing, ongoing uses?

Buffer BMP – Vegetation Management

- Why can't farmers harvest trees within the buffer to keep them from falling into streams and blocking flow?

- If treed buffers are required, beaver ponds will result, and loss of land.

- Farmers should be allowed to get profits from riparian buffers through managed grazing, hay production, or forest harvesting.

- Grass is an excellent filter; farmers should not be required to replace it with trees.

- Center-pivot irrigation systems will become useless under buffer requirements; trees on ditches under the rule would obstruct the sprinklers.
  If a farmer chooses the standard BMP option, he has the further option of installing 30-foot vegetated buffers in combination with nutrient management or water control structures. Trees are not required in vegetated buffers, which should not interfere with sprinkler operation. If the land is sufficiently flat to use pivot irrigation, then water control structures may be an option. If so, where they can be used in combination with nutrient management, no buffers would be needed.

- Trees contribute 50% of nitrogen going into streams, and now the state wants people to put in trees.

Buffer BMP – Water Management

- The rule prohibits ditch maintenance. This is intolerable.
  Wording addressing ditch maintenance in the Neuse agriculture rule was inadvertently excluded. However, this wording addresses only maintenance of modified natural streams. Therefore, the following language is proposed for addition under (h)(5), which lists allowable activities in forested riparian areas (allowable activities in vegetated riparian areas include all of these and others listed under (i)(3)). "Periodic maintenance of ditches, including modified natural streams such as canals, provided that disturbance is minimized and the structure and function of the riparian area is not compromised. A grass travelway is allowed on one side of the waterbody when alternative forms of maintenance access are not practical. The width and specifications of the travelway shall be only those needed for equipment access and operation. The travelway shall be located to maximize stream shading."

- Under buffer requirements, concentrated runoff from NEW ditches must be dispersed, but existing ditches are allowed to remain when buffers are created. Doesn't this defeat the purpose of the buffer? If ditches cannot be removed due to lack of relief, then water control structures should be the BMP of choice, but lack of relief shouldn't be an argument for allowing ditches to remain where buffers are the BMP of choice.

- It is unreasonable to prohibit new ditches through the buffer [.0256(g)(2)]. Farmers rely on existing ditches to connect new ones to. Pumping would be a ridiculous expense.

- .0256(g)(1) requires establishment of sheet flow through buffers, including reestablishing vegetation. Taking all vegetation off existing stable ditch banks and grading and revegetating them would unnecessarily increase pollution and double costs. Please remove this section.

Committees

- Local control is essential.
- Farmers should have greater weight in the LACs, rather than agency people. LACs should be made up of at least 50% farmers. Farmer trade groups should be able to appoint representatives.
- The Neuse rule calls for the EMC and the SWCC to approve nominations to the LACs. The Tar rule should be the same but isn't. This was a big sticking point in Neuse rule development. ***This wording was unintentionally omitted when the rule was reorganized for the Tar basin, and will be reinserted from 4(b) of the Neuse agriculture rule.***
- The BOC should serve as arbitrator if farmers object to rulings by DWQ staff on their BMPs under the local plan.

- The stakeholders agreed that the technical committee appointed by the BOC was also supposed to: consider alternative accounting methods, evaluate emerging atmospheric nitrogen findings, and evaluate accounting baseline issues.
- LACs should include environmental professionals from state resource agencies.
- Minimize additional boards and committees. Couldn't the existing NC Agriculture Task Force handle basin oversight, and FSA or local SWCD boards handle local implementation?
- Strike wording that if BOC doesn't approve accountability process in 15 months, they can put all farmers under the standard option; too drastic.

Timeframes

- Five years is an unrealistic timeframe for farmers to absorb costs and for agency staffs to write or review plans for all producers. Longer phase-in periods should be provided for implementation. At least 10 years. Consider phasing in actions by farmers in 5-year steps. For example, provide alternative water the first 5 years, phase in fencing, alternative shade in 10-15 years (takes that long to grow it), etc.
- Give longer than one year to conduct sign-ups. Two years would be reasonable.

Accounting

- The Neuse rule allows the BOC to decide how to allocate the 30% among counties. The Tar rule should do the same but doesn't.
  In the Neuse basin, this option was not exercised by the BOC; instead, all counties were assigned 30%. However, it would be reasonable to provide the same opportunity for the BOC in the Tar basin to consider allocating the goal unevenly among counties. Language will be included under (l)(2)(B) to provide that flexibility, such as - "Demonstrate within 18 months of the effective date of this Rule how the nitrogen and phosphorus loads can be met ~~by each county or watershed and~~ collectively by the implementing BMPs and how those loads will be allocated among counties or watersheds."

- Credit for practices already in place:
  - Credit must be given for ongoing good stewardship. Farmers have already done many things that should be given credit toward the 30% goal:
    - large shift from corn to cotton in recent years,
    - implementation of 1985 Farm Bill measures – Conservation Compliance, CRP, HEL – that reduced N inputs,
    - increases in conservation tillage,
    - effects of .0200 rules,
    - use of more nutrient-efficient crop varieties,
    - use of precision farming techniques,
    - reduction in cropland acres since 1991 through conversion to other land uses.
  - The rule is fair since it gives credit for existing BMPs.
  - Credit should not be limited to a narrow set of official "nutrient BMPs". This will discourage farmers from other activities that influence yields and therefore nutrient removal, such as: variety selection, integrated pest management, lime management (soil testing), no-till in the Tidewater region, and tiller density monitoring to make nitrogen timing decisions for wheat.
  - Farmers should have the option of doing sampling up- and downstream on their property to demonstrate compliance.
  - Don't use a later year than 1991 as baseline; farmers will lose credit for practices installed then.

- How is nutrient load from grazing operations estimated? Reductions?

- Use of soil tests and fertilizer application rates to estimate loading is suspect; soils vary greatly in N-holding capacity, yield goals vary, cropping changes occur.

- There is too much reliance on NCSU guidelines for soil tests, fertilization. Other sources should be allowed, also because state soil labs are overrun with samples due to precision farming efforts.

- An intense level of assessment is being required of only agriculture; requirements should be equitable among source types.

Phosphorus

- A starter application of P can be important, even in high-P soils, for rapid plant establishment and reducing the risk of crop losses to insects, weeds, and drought. This risk management tool should be considered a component of both IPM and nutrient management. New NRCS guidelines allow

this if a statement is included justifying its use. Appropriate NCSU departments could develop a standard justification statement.

Implementation Issues

- Cost issues for farmers:
  - Producers are facing low commodity prices for grains, cotton, peanuts, and tobacco, and will be financially constrained in trying to meet rules.
  - Buffers required under the rules represent an economic hardship to farmers, a taking, and must be compensated. Trees affect an adjacent area ten times their height.
  - Cost share is hard to get, it only pays after installation, and you are taxed on it.
  - Who will pay for the buffers? Farmers can't afford them.
  - Various cost estimates for compliance with the rule are:
    - For buffers, fence, and water will be over $3,000/acre.
    - Fencing will cost $15,000/acre.
    - Buffers will cost $866/acre.
    - Vegetative filter strip (buffer) establishment is $1,000/acre, or about double that, $1,866/acre, to include sheetflow.
    - $1,866/acre to plant trees, grass, plus land value equals $3,000/acre.
  - Farmers who rent land will have to pay for fences and other improvements on land they don't own; these are straight losses for renters.
- Costs to local agriculture agencies:
  - There is very inadequate funding and staff in the agriculture agencies and DWQ to implement the rules.
  - The Neuse LACs are frustrated by lack of resources to implement the rule, and now NRCS has had severe cutbacks in staff.
- The rules are complex, and don't identify who will interpret, administer, and enforce on a local level. Farmers are concerned that local agencies who interpret will not be those who they need to satisfy.

State of North Carolina
Department of Environment and Natural Resources

Report of Proceedings on Proposed Rules for Protection and Maintenance of Riparian Areas in the Tar-Pamlico River Basin

Environmental Management Commission Meeting
December 9, 1999

Public Hearings:

August 31, 1999
Pitt County Extension Center
Greenville, NC

September 2, 1999
Nash County Agriculture Center
Nashville, NC

Printed on November 29, 1999

History

The Tar-Pamlico River Basin contains one of the most productive estuaries in the eastern United States. Its resources include an extremely valuable commercial and recreational fishery. As with many productive estuaries, the Pamlico system has demonstrated the potential for problematic over-enrichment due to human increases in nutrient inputs. Nitrogen and phosphorus are the nutrients of greatest concern, with nitrogen typically acting as the limiting nutrient on plant growth.

Water Quality: Recurring nutrient-related problems have been documented through the latter half of the 20th century. Fishermen reported the presence of diseased fish as early as 1950. The frequency of these reports in the Pamlico River estuary increased significantly in the late 1970's and early 1980's. The number of fish kills documented by the state in the estuary also increased greatly between the mid-70's and the mid-80's, and then again between 1987 and 1992. In 1988, Governor Martin established the Pamlico Environmental Response Team to investigate the increasing presence of fish and crab diseases, algal blooms, hypoxic conditions, loss of aquatic vegetation, and degradation of the region's water quality. The team operated for two years, and made recommendations on controlling urban and agricultural pollution and on further studies.

Researchers who have studied the river system intensively since the 1960's have estimated that there was a several-fold increase in nitrogen inputs to the basin during the last century. Most of the increases were attributed to increased crop fertilization and production, particularly since the 1950's. Increases in farm animals and point source discharges also contributed to the rise in nitrogen inputs. Recent studies have shown that nitrogen levels instream have decreased somewhat in the last twenty years. However, they are still considered to be sufficiently high to foster the growth of harmful algal blooms.

Violations of the chlorophyll *a* standard increased from about 1970 through the early 1990's in the upper Pamlico River estuary. Chlorophyll *a* reflects phytoplankton growth, or algae suspended in the water column. Scientists suspect that a decrease in suspended sediments in the water has allowed greater light penetration, and that this, combined with the high nitrogen levels, has resulted in greater nuisance algal production. The most recent data collected by DWQ scientists indicates that algal growth does not appear to have increased substantially over the last several years.

Environmental conditions in the Tar-Pamlico River are driven by complex interactions between rainfall, flows, temperatures, biological factors, and chemistry. Each year brings its own variations. However, the history of problems related to excessive nutrient levels provided solid evidence that management steps were needed.

Phosphorus loading to the estuary decreased significantly as a result of two events beginning in the late 1980's. Effective January 1, 1988, the NC General Assembly adopted a statewide phosphate detergent ban. In the fall of 1992, PCS Phosphate, located on the Pamlico River estuary in Aurora, began a wastewater recycling program that reduced its phosphorus discharge by about 94%.

NSW Strategy, Phase I: In December 1989, in response to the increases in algal blooms, fish diseases, and fish kills in the Pamlico River estuary, the Environmental Management Commission (Commission) designated the Tar-Pamlico River Basin as Nutrient Sensitive Waters (NSW). The designation was applied from the headwaters to a line across the mouth of the Pamlico River between Roos and Pamlico Points. This designation required the state to develop a nutrient management strategy for the basin.

The first phase of the strategy largely targeted wastewater treatment plants and other "point source" discharges of water, since they made significant nutrient contributions to the river and were better understood than nonpoint sources. The Phase I Agreement, from 1990 through 1994, included an innovative nutrient trading program between point and nonpoint sources of nutrients that served as a nationwide benchmark. An association of point source dischargers known as the Tar-Pamlico Basin Association (Association) agreed to either reduce their nutrient loading to the basin, or, if they exceeded an annually decreasing, collective loading cap, to fund agricultural Best Management Practices (BMPs) aimed at reducing nitrogen loading. The parties to this Agreement were the Association, the Division of Water Quality, two environmental groups - the Environmental Defense Fund and the Pamlico-Tar River Foundation - and the Environmental Management Commission. The nonpoint source approach in Phase I was to encourage farmers to utilize the state Agriculture Cost Share Program to implement nutrient-reducing Best Management Practices (BMPs).

The Phase I Agreement yielded progress in several respects:

- In each year, 1990 through 1994, the Association kept nutrient loading beneath an annually decreasing cap, reducing overall nitrogen and phosphorus loads by about 20%, despite flow increases due to growth of about 7%.
- An estuary model funded by a federal grant to the Association was completed, allowing establishment of an overall reduction goal for the estuary based on water quality standards.

- The Association provided up-front funding of almost $1 million worth of agricultural BMPs, in large part through a federal EPA grant. They banked credit from this funding for future cap exceedences.

NSW Strategy, Phase II: Adopted by the EMC in December 1994, Phase II covers the period 1995-2004. Based on the estuary model, a 30 percent reduction in total nitrogen loads to the estuary from 1991 conditions was set as an interim goal for Phase II, along with no increase in phosphorus loads. Based on these goals, point sources received separate nitrogen and phosphorus caps in Phase II. The caps amounted to about 67% and 69% of their pre-Agreement nitrogen and phosphorus loads, respectively. Each year through 1998, the Association's nitrogen loads have remained from 5% to 15% beneath the cap, while its phosphorus loads have ranged 25% to 35% below cap.

Phase II also required a plan to achieve the reduction goals for nonpoint sources. In December 1995, the EMC adopted a "voluntary" plan that relied on existing programs to achieve the goals through better targeting, coordination, and increased effort. It included action plans for nine different nonpoint source categories. The EMC received annual status reports on implementation progress beginning in May 1997.

Rulemaking: After two years of implementing the voluntary nonpoint source plan, in July 1998, the EMC determined that progress was inadequate and called for development of rules to achieve the nonpoint source reduction goals. DWQ staff convened stakeholder teams around seven subject areas identified by a steering committee and held intensive meetings from November 1998 through February 1999. Stakeholder teams had primary responsibility for developing draft rules for public hearing or other recommendations. Meetings were professionally facilitated and provided a consensus approach for all affected interests to search for mutually acceptable solutions. Teams met on the following subjects:

1. Atmospheric emissions of nitrogen
2. On-site wastewater
3. Construction erosion and sedimentation control
4. Restoration of wetlands, buffers, and streams
5. Agriculture
6. Nutrient management - fertilizer use for all land uses
7. Urban stormwater
(8. Riparian buffer protection)

On the eighth subject, protection of existing riparian buffers, the steering committee agreed to accept the product of a legislatively established stakeholder advisory committee for the adjacent Neuse River Basin. The stakeholder teams developed draft rules on the last four subjects. The teams proposed very similar

rules for the same nonpoint source categories as those recently adopted in the Neuse River Basin. The rules specified mandatory measures for each of these sources. Teams one through four did not propose new rules, but did recommend other actions by the EMC. In May and July 1999, the EMC approved most of these other actions.

In May 1999, the EMC approved the first 60-day comment period on the subject matter of the rules proposed by the stakeholder teams: agriculture, urban stormwater, nutrient management, and riparian buffer protection. In addition, the EMC included the subject of atmospheric emissions of ammonia. In adding this subject, members showed a strong interest in hearing the public's concerns on it, particularly related to ammonia emissions from confined animal operations. The comment period ran from June 1 through July 30, 1999.

In July 1999, the EMC approved a second 60-day comment period and public hearings on the text of the rules. The comment period was scheduled to run from August 1 to September 30. In accordance with NC general statutes, two public hearings were held, one in Greenville on August 31, 1999 and one in Nashville on September 2, 1999.

During this time, DWQ staff developed several public information documents to help clarify the intent and details of the proposed rules. These documents included the following:

1. *Rule Summaries* - One-page summaries of each of the proposed rule subjects, 4 total.
2. *Q&A* - Frequently asked questions about the proposed Tar-Pamlico agriculture rules, and responses from DWQ staff (3 pages).
3. *Fiscal Analysis* - A detailed analysis of the fiscal impacts of the proposed rules on all affected sectors (194 pages).
4. *Overall Strategy to Date* - The Phase II Nutrient Sensitive Waters Agreement that addresses point sources and the voluntary nonpoint source plan currently in effect (178 pages).

Also, on July 20, 1999, the General Assembly adopted the *Clean Water Act of 1999*, or *House Bill 1160*. This bill provided the EMC with direct authority to adopt temporary rules to protect water quality standards in three basins, one of which was the Tar-Pamlico. The Department of Environmental and Natural Resources determined that the EMC should have the opportunity to consider adoption of the proposed Tar-Pamlico rules as temporary rules, and published a notice requesting comments on this subject. A 30-day comment period ran from September 1-30, 1999, and comments were requested at the public hearings as well.

Three members of the Environmental Management Commission served as hearing officers – Marion Deerhake, Robert Cook, and Charles Peterson. The hearings were well-attended; the following table summarizes public participation.

Hearing Location	Registered Attendees	Speakers
Greenville	104	15
Nashville	183	37

During September, Hurricane Floyd and other hurricanes devastated eastern North Carolina. Recognizing the impacts of the hurricanes, the hearing officers initially extended the September 30 public comment deadline to October 15th, wishing to stay within the rule-making schedule. As the scale of impacts became clearer, they responded to public requests and extended the comment period for three of the four rule subjects through December 31, 1999. The hearing officers closed the comment period on the riparian buffer protection rules on October 15th, recognizing the importance of timely efforts to protect these landscape features. In addition to oral comments received at the public hearings, DWQ received written comments from a total of 231 people on the proposed rules through October 15, 1999.

Since the comment period for the other three rule subjects remains open until the end of the year, the remainder of this report addresses only the rules relating to protection of riparian buffer areas. The hearing officers will bring the other rules to the Environmental Management Commission early in the year 2000, after they have reviewed and evaluated all of the comments.

The main purpose of the proposed buffer rules is to prevent increases of, and where possible, contribute to reductions in nitrogen and phosphorus loading to the basin. The other proposed nonpoint source rules, along with the point source portion of the Phase II Agreement, are designed to achieve the nitrogen and phosphorus reduction goals. The buffer rule establishes protection for the first 50 feet of vegetated riparian areas along all intermittent and perennial streams, lakes, ponds and estuaries in the Tar-Pamlico Basin. The idea is to direct runoff and sub-surface flow through the buffer as diffuse flow to remove nutrients. The roots of trees in the buffer intercept nitrogen moving towards streams through shallow groundwater and convert it into harmless nitrogen gas. The rule provides exemptions for activities such as road and utility crossings, greenway trails and water-dependent projects that are difficult to completely avoid siting in the buffer.

The proposed rules are adapted from the adjacent Neuse River Basin, where they have been implemented since 1997 and have undergone extensive scrutiny and

modification. During May 1998, the Division of Water Quality (DWQ) held a series of training sessions in an effort to address questions and concerns regarding implementation of the Neuse buffer rule. Considerable concerns remained and during the summer of 1998, meetings were held between members of the General Assembly, the Department of Environmental and Natural Resources, the regulated community, and the environmental community. As a result of ongoing concerns, the General Assembly passed House Bill 1402 in 1998. HB 1402 outlined rule implementation on an interim basis, created a Stakeholder Advisory Committee, called for alternatives to maintaining buffers through a compensatory mitigation program, established a Riparian Buffer Mitigation Fund and program, and called for the Commission to adopt rules providing for delegation of the program to interested local governments.

The Neuse buffer rule Stakeholder Advisory Committee included 23 members representing a broad range of interests, including development, agriculture, local government, mining, forestry and the environmental community. The stakeholder committee was tasked with evaluating the rules and making recommendations to improve them. The committee met from October 1998 through March 1999. The stakeholders' recommendations were adopted by the Tar-Pamlico stakeholders' steering committee, and included in the public review and comment process for the Tar-Pamlico Basin nonpoint source rules.

Recommendation

The proposed rules for riparian buffer protection have been developed on the basis of the Stakeholder Advisory Committee's recommendations and the Hearing Officers' review and analysis of public input from concerned citizens, interested groups and organizations. It is the recommendation of the Hearing Officers that these rules, as proposed herein, be approved by the full Environmental Management Commission and be filed as permanent rules with the Rules Review Commission. In addition, the Hearing Officers recommend that these rules be adopted by the Environmental Management Commission as temporary rules, to take effect on January 11, 2000, after publication in the NC Register. In making these recommendations, the Hearing Officers have considered the requirements pursuant to 1999 NC Session Laws, c. 329 and NC General Statutes 143-214.1, 143-214.7, 143-215, and 143B-242(d).

Protection and Maintenance of Existing Riparian Areas, .0259

Summary of Proposed Rule that Went to Public Hearing

The proposed rule would require that **existing** vegetated riparian (waterside) areas, or buffers, in the basin be protected and maintained on both sides of intermittent and perennial streams, lakes, ponds, and estuarine waters. **This rule does not establish new buffers unless the existing use changes.** The footprints of existing uses such as agriculture, buildings, industrial, commercial, and transportation facilities, maintained lawns, utility lines, and on-site wastewater systems are exempt. A total of 50 feet of riparian area is required on each side of these waterbodies. Within this 50 feet, the first 30 feet, referred to as Zone 1, is to remain undisturbed with the exception of certain activities. The outer 20 feet, referred to as Zone 2, must be vegetated, but certain additional uses are allowed. Specific activities are identified in the rule as "exempt", "allowable", "allowable with mitigation" or "prohibited". Examples of "exempt" activities include driveway and utility crossings of a certain size through zone 1, and grading and revegetation in zone 2. "Allowable" and "allowable with mitigation" activities require review by DWQ staff and include activities such as new ponds in drainage ways and various water crossings.

Comments and Responses

General

Comment: The rule reflects a complex balance among competing interests; the EMC should carefully consider the necessity and value of any revisions.

Response: The Hearing Officers fully appreciated the balance of interests that the Neuse buffer stakeholder committee produced, and limited language changes to those needed to clarify intent and those addressing issues not fully considered by the stakeholder committee.

Comment: The rule should not be expanded from its earlier focus on forest vegetation to include protection for all vegetation.

Response: The Neuse buffer stakeholder committee had extensive discussion on this issue. The majority of the Committee agreed that the buffer should be 50 feet wide and apply to all vegetation with exemptions for existing uses. However, some members of the Committee believed that the extension of the rule to all vegetation rather than just areas with forest vegetation was too expansive. Additionally, concern was raised that extending the buffer

protection to all vegetation would limit opportunities for mitigation. However, in balancing these views, the stakeholder committee recommended that the rules apply to all vegetated buffers

Comment: The objective of the buffer rules is too narrow; the state should recognize and protect streams and their buffers for the numerous functions they perform, not just sediment and nutrient reduction.

Response: A more holistic approach to resource protection is certainly a desirable goal. However, the NSW classification provides the EMC with authority to address activities associated with nutrient loading. Other legislation provides the EMC with authority to adopt rules to address other water quality issues if a need is demonstrated.

Pasture Livestock Operations in the Buffer

DWQ received numerous comments from cattle farmers and other pasture livestock operators describing the impact of the rules on their livelihoods. Their concerns stemmed from language in both the agriculture rule and in the buffer protection rule. Concerns related to the agriculture rule will be addressed at such time as the EMC considers its adoption. The following comments reflect livestock farmers' concerns with the buffer protection rule.

Comment: The rule will require fencing cattle out of streams, which will put cattlemen out of business.

Comment: The rule won't allow cattle crossings, which denies use of the land.

Comment: Exemption language for ongoing uses prohibits removal of any "additional vegetation" and "disturbance of surface waters"; this will prohibit use of buffers by cattle and is unreasonable.

Response: The rule contains no language requiring fencing or prohibiting cattle crossings. The footprint of ongoing agricultural activities within the buffer is exempt, as described under (3)(b)(I). The Neuse buffer stakeholder committee did not intend to impose any requirements that would interfere with continuing any ongoing agricultural operations. The committee did not intend to require fencing or prohibit cattle crossings. However, certain language in the exemption section can cause conflicts with this intent. That language, which prohibits removal of additional vegetation or disturbance of surface waters in order to remain exempt, was modified to remove this conflict and to allow ongoing cattle operations to remain exempt.

Comment: The exemption for ongoing uses is limited to "the footprint of the existing use"; this is unclear regarding buffer use by cattle. Please clarify to allow cattle in buffers.

Response: The language in (3)(b)(i) reads, "Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from this rule". The Hearing Officers' intent was to include the boundary of areas disturbed by cattle within the buffer under the exemption. They considered various alternatives to this language but decided to retain this wording.

Agricultural Activities in the Buffer

Comment: Farmers must be allowed to continue current activities in the buffer, including stream crossings.

Response: The rule exempts the footprint of existing, ongoing activities, including agricultural activities. Existing agricultural stream crossings would be exempt.

Comment: The exemption for existing uses in the buffer is lost when such uses are converted to other uses. According to the rule, an existing agricultural use is considered converted to another use when it is "taken out of production". For various reasons, agricultural land may fall out of production for a time. Resting land benefits water quality and should not be discouraged. Language should be added to allow for resting or conservation of land without losing exemption status.

Response: The Hearing Officers agreed to change the rule language so that the exemption would only be lost when the land is "converted to a non-agricultural use".

Comment: An earlier version of the buffer rule exempted agriculture if activities complied with the agriculture rule. This provision should be reinstated.

Response: The Neuse buffer stakeholder committee chose to establish an exemption for the footprint of various ongoing activities, including agriculture, provided certain conditions are met. The Tar-Pamlico Hearing Officers felt it was important to respect the committee's decision.

Comment: The rule should include an exemption for small impacts to allow farmers to conduct minimally impacting activities.

Response: As noted above, the footprint of ongoing agricultural activities is exempt, so this request would pertain to areas outside of the footprint of such activities. The Neuse buffer stakeholder committee heard this proposal and chose not to provide additional exemption for agricultural activities based on size of disturbance.

Comment: Does a new instream pond on an ongoing agricultural operation require a buffer? Is this exempt under (3)(b) or does it fall under ponds in the table of uses? If instream ponds remove nutrients, why should a farmer be penalized with new buffer requirements for installing one?

Response: The Neuse buffer stakeholder committee made a clear determination that new ponds in drainage ways, under agricultural or other use, would require buffers or buffer mitigation. Language in the table of uses under ponds is meant to apply to agriculture as well.

Ditches in the Buffer

Comment: Do roadside ditches fall under the rule? If so, adjacent private property owners would be penalized for DOT ditches.

Response: "Ditches and manmade conveyances other than modified natural streams" are exempt, as described in Item (3)(a)(i). Thus, the vast majority of roadside ditches would be exempt. Only ditches that are modified natural streams would be subject to the rule, and in this case, property owners would not be penalized for DOT activities.

Comment: The rule prohibits ditch maintenance – this is unreasonable.

Response: The rule does not prohibit ditch maintenance. Since manmade ditches are exempt, as described in Item (3)(a), maintenance of these ditches is also exempt. New ditches, however, are subject to the rule as described in the table of uses under drainage ditches.

Comment: Existing drainage ditches should not be exempt – this is a major loophole.

Response: The Neuse buffer stakeholder committee agreed to this exemption. They recognized that many ongoing land uses depend on the continued function of existing drainage networks.

Forestry Activities in the Buffer

Comment: The rule's forestry provisions offer adequate water quality protection. Loading from properly managed forests is essentially at background levels.

Response: DWQ staff agrees that nitrogen loading from properly managed forests is essentially at background levels. The Neuse buffer stakeholder committee spent considerable time working out agreement on what would be considered proper forest management in the buffer, and produced the detailed recommendations contained in Item (11).

Comment: Requirements to leave timber in the buffer are a taking without compensation. The state should purchase this timber.

Response: While the proposed rule does not allow unlimited timber removal, substantial harvesting is allowed, as well as other uses of the buffer. Therefore, DWQ does not believe that the proposed restrictions would constitute a "taking".

Comment: Harvesting of old trees should be allowed in the first 10 feet adjacent to the surface water.

Response: The buffer protection rule does allow harvesting of individual high value trees in the first 10 feet of Zone 1, as described in (11)(b)(4).

Comment: Requirements for manual removal of trees from zone 1 will increase fatal accidents in the woods.

Response: While safety issues are an important concern, forest management interest groups participated in the Neuse buffer stakeholder meetings and agreed to the language proposed. They did not forward such a safety concern.

Comment: To protect streams, adjacent trees need to be harvested – otherwise, wind throws occur. The rule needs to encourage young stands in the buffer.

Response: The forestry provisions, Item 11, which are the result of extensive debate by the Neuse stakeholder committee, allow substantial tree harvesting in zone 1 and full harvesting in zone 2. In other words, the forestry provisions do allow for maintaining relatively young stands. The rule also allows activities that address health and safety concerns, and streambank restoration is also allowed.

Comment: The rule should include provisions for ditch management that would apply to forestry.

Response: Since manmade ditches are exempt as described in Item (3)(a), maintenance of existing ditches is also exempt. New ditches are subject to requirements listed in the table of uses under drainage ditches.

Comment: The definition of a high value tree mixes wood types (hardwood and pine) with ecosystem setting (wetland species). This is confusing.

Response: In this definition, Item (2)(g), the term "wetland species" is designed to imply not physical location, but scientifically recognized hydrophytic tree species. The term was included to capture non-hardwood (e.g., cypress, eastern white cedar, tupelo) wetland species in addition to hardwoods. However, the definition used a disjunction – or - where a conjunction would be more appropriate. The definition was changed to correct this.

Comment: Why is limited mechanized equipment allowed in buffers under the agriculture rule for selective cutting of trees, (h)(5)(B), but not under the forestry provisions of the buffer protection rule?

Response: The allowance in the agriculture rule was unintentionally retained from an earlier version of rule language. It does not exist in the Neuse agriculture rule. The buffer protection rule provisions are the result of extensive review by a stakeholder committee. When the Hearing Officers review comments on the agriculture rule, they will be asked to remove the allowance for mechanized equipment in that rule.

Comment: Forested buffers adjacent to forested tracts of land should be exempt from the rule.

Response: The assumption behind this comment may be that the adjacent forested land provides water quality benefits to surface waters. However, adjacent forest may be cut at any time. The purpose for having special forestry provisions in the buffer rule is to provide protections that would not be assured under normal forest practice guidelines.

Comment: The forestry provisions require leaving trees with roots growing in the stream. These will be the first trees that are wind-thrown after the adjacent timber is removed. To protect the stream, these trees should be harvested.

Response: The Neuse buffer stakeholder committee agreed to this and other forestry provisions after much discussion. The Tar-Pamlico Hearing Officers felt that it would be important to respect their decisions. Part of the stakeholders' logic in requiring that these trees remain is that they stabilize streambanks. Also, the forestry provisions do not allow all of the adjacent timber to be removed. In the first ten feet, only individual high value trees may be removed. In the outer 20 feet of zone 1, 50 percent of trees may be removed every 15 years. Remaining timber would provide some protection from wind throws.

Miscellaneous Issues

Comment: Should "surface water" be defined since it is used as the starting point for measuring buffer width under Item (4)?

Response: Surface waters are defined in another water quality rule, 15A NCAC 2H .0203. For convenience, this definition was added to the rule text as a new (2)(m): 'Surface waters' means all waters of the state as defined in G.S. 143-212 except underground waters.

Comment: The decision of whether a stream should be included under the rule should be based on ground truthing because the maps are often wrong. Besides, if the USGS and the soil survey maps don't compare, one must be wrong.

Response: The Neuse buffer stakeholder committee agreed to the use of USGS maps and soil surveys after extensive discussion. A major consideration was the desire for predictability and allowing the regulated public to be able to determine in advance whether features on their property would fall under the rule without having to obtain agency review. The two reference sources may not compare because, for one reason, soil surveys are done with ground truthing and sometimes at a finer scale than the USGS topographic maps. This doesn't make the USGS map wrong, but rather the soil survey is sometimes a finer instrument for identifying streams.

Comment: The rule needs to provide a set of criteria for local Boards of Adjustments to use when they review appeals of variance decisions.

Response: The rule, under (9)(a), does provide a set of requirements for evaluating variance requests. Boards of Adjustment, which would hear appeals of minor variances under delegated programs, would use these criteria to make appeal decisions. However, the Hearing Officers agreed to add several criteria to the rule under Item (9) to further guide determination of whether "practical difficulties or unnecessary hardships" exist on a property. These criteria would be used to guide all variance decisions - major, minor, delegated, or not delegated.

Comment: Measurement of the buffer width should begin at the landward limit of all wetlands.

Response: The Neuse buffer stakeholder committee weighed the contention that wetlands themselves act to buffer surface waters from adjacent land uses, and determined that the legislation was not intended to result in "buffering the buffers". Wording has been added under Item (3) to clarify the intent.

Comment: If buffers must be fenced, access will be blocked for horse riders and 4-wheelers. This is unreasonable.

Response: As described above, the rule includes no requirement to fence buffers. However, the Neuse buffer stakeholder committee did not include 4-wheeling as an allowable use of the buffer. 4-wheelers could cause buffer impacts that would be counter to the intent of the rule.

Modifications to the Proposed Rule as a Result of Comments

The following modifications were made to the rule for protection and maintenance of riparian buffers:

1. References to "riparian buffers" were changed to "existing riparian buffers." The word "existing" was added to clarify the intent of the Stakeholder Advisory Committee and the Environmental Management Commission.
2. Language was added to Item (3) of the rule addressing wetlands in keeping with the spirit of the rule to protect and maintain existing riparian buffers adjacent to surface waters.
3. Sub-Items, (3)(b)(i) and (3)(b)(ii), were modified to clarify activities considered as existing agricultural use, such as livestock operations.
4. Hiking trail was added as an allowable use in the Table of Uses.
5. Mining activities in the Table of Uses were better organized for clarity concerning location, allowed activities and prohibited activities.
6. A clause was added under non-electric utility lines in the Table of Uses allowing maintenance corridors.
7. A bullet was added under road crossings and railroad crossings in the Table of Uses to be consisted with other uses in the table.
8. A bullet was added under temporary roads in the Table of Uses to clarify the requirements for temporary roads in riparian buffers.
9. Sub-Item (7)(d) was modified to better state the intent of the Stakeholder Advisory Committee and the Environmental Management Commission.
10. Sub-Items (9)(a)(i)(A) through (9)(a)(i)(E) were added to provide a clearer basis for evaluating variance requests and appeals of variance decisions.
11. Other minor changes in wording were made throughout to clarify the intent for rule implementation purposes.

Mitigation Program for Protection and Maintenance of Riparian Buffers, .0260

Summary of Proposed Rule that Went to Public Hearing

The purpose of the mitigation rule is to provide sound alternatives to protecting an existing buffer, that would achieve the same water quality goals, when there are no practical alternatives to impacting the buffer or when protecting the buffer would result in practical difficulties or unnecessary hardships. The rule describes the process of compensatory mitigation when such conditions have been demonstrated. Mitigation would be carried out by the developer, private banks or the N.C. Wetlands Restoration Program. Persons could meet the mitigation requirement by choosing: 1) to pay a compensatory mitigation fee to the Riparian Buffer Restoration Fund, 2) to donate real property or an interest in real property, or 3) to conduct riparian buffer restoration or enhancement themselves.

Comments and Responses

Comment: When a disturbance exceeds linear or square footage thresholds identified in the buffer protection rule, the mitigation rule needs to clarify whether the area of mitigation equals the entire disturbance area or the disturbance area exceeding the thresholds.

Response: Item (3) of the proposed rule clearly states that the area of mitigation is to equal the entire impacted area.

Modifications to the Proposed Rule as a Result of Comments

1. Minor changes in wording were made throughout to clarify the intent for rule implementation purposes.

Delegation of Authority for the Protection and Maintenance of Riparian Buffers, .0261

Summary of Proposed Rule that Went to Public Hearing

The purpose of this rule is to establish a process to allow voluntary delegation of the riparian buffer protection and maintenance rule to qualified local governments with DWQ oversight. Any local government in the basin that has the power to regulate land use may request that responsibility for the implementation and enforcement of the state's riparian buffer protection requirements. After receiving delegation, a local authority would be responsible for reviewing proposed uses within riparian buffers that are "allowable" and "allowable with mitigation" and issuing approvals if the uses meet requirements. For variance requests, the delegated local authority would be responsible for reviewing and either providing approvals for minor various requests or making recommendations to the Environmental Management Commission for major variance requests.

Comments and Responses

Comment: Once a delegation of authority is made, the Division of Water Quality should not be overseeing each decision made. The efficiencies gained by local decision-making can be largely lost.

Response: House Bill 1402 directed the state to establish a process to allow voluntary delegation of the riparian buffer protection rule to qualified local governments with DWQ oversight. This is also consistent with the state's water supply watershed program.

Modifications to the Proposed Rule as a Result of Comments

1. Minor changes in wording were made throughout to clarify the intent for rule implementation purposes.

Copy of the Proposed Rules

A copy of the full text of each proposed rule for protection and maintenance of riparian buffers in the Tar-Pamlico River Basin follows. Plain text reflects language that was noticed in the North Carolina Register, underlined text reflects new language from what was noticed, and struckthrough text reflects deleted language.

15A NCAC 2B .0259 is proposed for adoption as follows:

.0259 TAR-PAMLICO RIVER BASIN: NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: PROTECTION AND MAINTENANCE OF EXISTING RIPARIAN BUFFERS

The following is the management strategy for maintaining and protecting existing riparian buffers in the Tar-Pamlico River Basin.

(1) PURPOSE. The purpose of this Rule shall be to protect and preserve existing riparian buffers, to maintain their nutrient removal functions, in the entire Tar-Pamlico River Basin, whose surface waters are described in the Schedule of Classifications, 15A NCAC 2B .0316. ~~to maintain their nutrient removal functions~~.

(2) DEFINITIONS. For the purpose of this Rule, these terms shall be defined as follows:

(a) 'Channel' means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water. (current definition in Forest Practice Guidelines Related to Water Quality, 15A NCAC 1I .0102)

(b) 'DBH' means Diameter at Breast Height of a tree, which is measured at 4.5 feet above ground surface level.

(c) 'Ditch or canal' means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.

(d) 'Ephemeral (stormwater) stream' means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary

source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.

(f) 'Forest plantation' means an area of planted trees that may be conifers (pines) or hardwoods. On a plantation, the intended crop trees are planted rather than naturally regenerated from seed on the site, coppice (sprouting), or seed that is blown or carried into the site.

(g) 'High Value Tree' means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; and, for hardwoods and ~~or~~ wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.

(h) 'Intermittent stream' means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the ~~continuous~~ conveyance of water.

(i) 'Modified natural stream' means an on-site channelization or relocation of a stream channel and subsequent relocation of the intermittent or perennial flow as evidenced by topographic alterations in the immediate watershed. A modified natural stream must have the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

(j) 'Perennial stream' means a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

(k) 'Perennial waterbody' means a natural or man-made basin that stores surface water permanently at depths sufficient to preclude growth of rooted plants, including lakes, ponds, sounds, non-stream estuaries and ocean. For the purpose of the State's riparian buffer protection program, the waterbody must be part of a natural drainageway (i.e., connected by surface flow to a stream).

(l) 'Stream' means a body of concentrated flowing water in a natural low area or natural channel on the land surface.

~~(m) 'Tree' means a woody plant with a DBH equal to or exceeding five inches.~~

(m) 'Surface waters' means all waters of the state as defined in G.S. 143-212 except underground waters.

(n) 'Tree' means a woody plant with a DBH equal to or exceeding five inches.

(3) APPLICABILITY. This Rule shall apply to 50-foot wide riparian buffers directly adjacent to surface waters in the Tar-Pamlico River Basin (intermittent streams, perennial streams, lakes, ponds, and estuaries), excluding wetlands. Except as described in (4)(a)(iii), wetlands adjacent to surface waters or within 50 feet of surface waters will be considered as part of the riparian buffer but are regulated pursuant to 15A NCAC 2H .0506. The riparian buffers protected by this Rule shall be measured pursuant to Item (4) of this Paragraph. For the purpose of this Rule, a surface water shall be present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). Riparian buffers adjacent to surface waters that do not appear on either of the maps shall not be subject to this Rule. Riparian buffers adjacent to surface waters that appear on the maps shall be subject to this Rule unless one of the following applies.

(a) EXEMPTION WHEN AN ON-SITE DETERMINATION SHOWS THAT SURFACE WATERS ARE NOT PRESENT. When a landowner or other affected party believes that the maps have inaccurately depicted surface waters, he or she shall consult the Division or the appropriate delegated local authority. Upon request, the Division or delegated local authority shall make on-site determinations. Any disputes over on-site determinations shall be referred to the Director in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of G. S. 150B. Surface waters that appear on the maps shall not be subject to this Rule if an on-site determination shows that they fall into one of the following categories.

(i) Ditches and manmade conveyances other than modified natural streams unless constructed for navigation and/or boat access.

(ii) Manmade ponds and lakes that are located outside natural drainage ways.

(iii) Ephemeral (stormwater) streams.

(b) EXEMPTION WHEN EXISTING USES ARE PRESENT AND ONGOING. This Rule shall not apply to portions of the riparian buffer where a use is existing and ongoing according to the following:

(i) A use shall be considered existing if it was present within the riparian buffer as of August 1, 2000. Existing uses shall include, but not be limited to, agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems. Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from this Rule. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from Zone 1 except that grazed or trampled by livestock and existing diffuse flow is maintained. Grading and revegetating Zone 2 is allowed

provided that the health of the vegetation in Zone 1 is not compromised, the ground is stabilized and existing diffuse flow is maintained.

(ii) At the time an existing use is proposed to be converted to another use, this Rule shall apply. An existing use shall be considered to be converted to another use if any of the following applies:

(A) Impervious surface is added to the riparian buffer in locations where it did not exist previously.

(B) An agricultural operation within the riparian buffer is ~~taken out of production~~ converted to a non-agricultural use.

(C) A lawn within the riparian buffer ceases to be maintained.

(4) ZONES OF THE RIPARIAN BUFFER. The protected riparian buffer shall have two zones as follows:

(a) Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided for in Item (6) of this Paragraph. The location of Zone 1 shall be as follows:

(i) For intermittent and perennial streams, Zone 1 shall begin at the most landward limit of the top of bank or the rooted herbaceous vegetation and extend landward a distance of 30 feet on all sides of the surface water, measured horizontally on a line perpendicular to the surface water.

(ii) For ponds, lakes and reservoirs located within a natural drainage way, Zone 1 shall begin at the most landward limit of the normal water level or the rooted herbaceous vegetation and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water.

(iii) For surface waters within the 20 Coastal Counties (defined in 15A NCAC 2B .0202) within the jurisdiction of the Division of Coastal Management, Zone 1 shall begin at the most landward limit of (a) the normal high water level, (b) the normal water level, or (c) the landward limit of coastal wetlands as defined by the Division of Coastal Management and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water, whichever is more restrictive.

(b) Zone 2 shall consist of a stable, vegetated area that is undisturbed except for activities and uses provided for in Item (6) of this Paragraph. Grading and revegetating Zone 2 is allowed provided that the health of the vegetation in Zone 1 is not compromised. Zone 2 shall begin at the outer edge of Zone 1 and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones 1 and 2 shall be 50 feet on all sides of the surface water.

(5) DIFFUSE FLOW REQUIREMENT. Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow and reestablishing vegetation.

(a) Concentrated runoff from new ditches or manmade conveyances shall be converted to diffuse flow before the runoff enters Zone 2 of the riparian buffer.

(b) Periodic corrective action to restore diffuse flow shall be taken if necessary to impede the formation of erosion gullies.

(6) TABLE OF USES. The following chart sets out the uses and their designation under this Rule as exempt, allowable, allowable with mitigation, or prohibited. The requirements for each category are given in Item (7) of this Paragraph.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Airport facilities: • Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer		X	X	
Archaeological activities	X			
Bridges		X		
Dam maintenance activities	X			

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Drainage ditches, roadside ditches and stormwater outfalls through riparian buffers: • Existing drainage ditches, roadside ditches, and stormwater outfalls provided that they are managed to minimize the sediment, nutrients and other pollution that convey to waterbodies • New drainage ditches, roadside ditches and stormwater outfalls provided that a stormwater management facility is installed to control nitrogen and attenuate flow before the conveyance discharges through the riparian buffer • New drainage ditches, roadside ditches and stormwater outfalls that do not provide control for nitrogen before discharging through the riparian buffer • Excavation of the streambed in order to bring it to the same elevation as the invert of a ditch	X	X		X X
Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the new channel	X			
Driveway crossings of streams and other surface waters subject to this Rule: • Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer • Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer • In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer • In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre of riparian buffer	X	X X	X	

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Fences provided that disturbance is minimized and installation does not result in removal of forest vegetation	X			
Forest harvesting - see Item (11) of this Rule				
Fertilizer application: • One-time fertilizer application to establish replanted vegetation • Ongoing fertilizer application	X			X
Grading and revegetation in Zone 2 only provided that diffuse flow and the health of existing vegetation in Zone 1 is not compromised and disturbed areas are stabilized	X			
Greenway / hiking trails		X		
Historic preservation	X			
Landfills as defined by G.S 130A-290.				X
Mining activities: • Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of Items (4) and (5) are established adjacent to the relocated channels • Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements or Items (4) and (5) are not established adjacent to the relocated channels • Wastewater or mining dewatering wells with approved NPDES permit	X	X	X	

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Non-electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only[3] • Impacts other than perpendicular crossings in Zone 1[3]		X	X	
Non-electric utility line perpendicular crossings of streams and other surface waters subject to this Rule[3]: • Perpendicular crossings that disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width • Perpendicular crossings that disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width • Perpendicular crossings that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width • Perpendicular crossings that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width • Perpendicular crossings that disturb greater than 150 linear feet of riparian buffer	X	X X	X X	
On-site sanitary sewage systems - new ones that use ground absorption				X
Overhead electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only[3] • Impacts other than perpendicular crossings in Zone 1 [1,2,3]	X X			

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Overhead electric utility line perpendicular crossings of streams and other surface waters subject to this Rule[3]: • Perpendicular crossings that disturb equal to or less than 150 linear feet of riparian buffer [1] • Perpendicular crossings that disturb greater than 150 linear feet of riparian buffer [1, 2]	X	X		
Periodic maintenance of modified natural streams such as canals and a grassed travelway on one side of the surface water when alternative forms of maintenance access are not practical		X		

[1] Provided that, in Zone 1, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternative evaluation by the Division.

- A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.
- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut.
- Rip rap shall not be used unless it is necessary to stabilize a tower.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.
- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
- Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

[2] Provided that poles or towers shall not be installed within 10 feet of a water body unless the Division completes a no practical alternative evaluation.

[3] Perpendicular crossings are those that intersect the surface water at an angle between 75° and 105°.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Playground equipment: • Playground equipment on single family lots provided that installation and use does not result in removal of vegetation • Playground equipment installed on lands other than single-family lots or that requires removal of vegetation	X	X		
Ponds in natural drainage ways, excluding dry ponds: • New ponds provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the pond • New ponds where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the pond		X	X	
Protection of existing structures, ~~and~~ facilities and streambanks when this requires additional disturbance of the riparian buffer or the stream channel		X		
Railroad crossings of streams and other surface waters subject to this Rule: • Railroad crossings that impact equal to or less than 40 linear feet of riparian buffer • Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer	X	X	X	
Removal of previous fill or debris provided that diffuse flow is maintained and any vegetation removed is restored	X			

	Exempt	Allowable	Allowable w/ Mitigation	Prohibited
Road crossings of streams and other surface waters subject to this Rule: • Road crossings that impact equal to or less than 40 linear feet of riparian buffer • Road crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Road crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer	X	X	X	
Scientific studies and stream gauging	X			
Stormwater management ponds excluding dry ponds: • New stormwater management ponds provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the pond • New stormwater management ponds where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the pond		X	X	
Stream restoration	X			
Streambank stabilization		X		
Temporary roads: • Temporary roads that disturb less than or equal to 2,500 square feet provided that vegetation is restored within six months of initial disturbance • Temporary roads that disturb greater than 2,500 square feet provided that vegetation is restored within six months of initial disturbance • Temporary roads used for bridge construction or replacement provided that restoration activities, such as soil stabilization and revegetation, occur immediately after construction	X	X X		

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Temporary sediment and erosion control devices: • In Zone 2 only provided that the vegetation in Zone 1 is not compromised and that discharge is released as diffuse flow in accordance with Item (5)	X			
• In Zones 1 and 2 to control impacts associated with uses approved by the Division or that have received a variance provided that sediment and erosion control for upland areas is addressed to the maximum extent practical outside the buffer		X		
• In-stream temporary erosion and sediment control measures for work within a stream channel	X			
Underground electric utility lines: • Impacts other than perpendicular crossings in Zone 2 only	X			
• Impacts other than perpendicular crossings in Zone 1[3,4]	X			
Underground electric utility line perpendicular crossings of streams and other surface waters subject to this Rule: • Perpendicular crossings that disturb less than or equal to 40 linear feet of riparian buffer[3,4]	X			
• Perpendicular crossings that disturb greater than 40 linear feet of riparian buffer[3,4]		X		

[3,4] Provided that, in Zone 1, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation by the Division.

- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench, where trees are cut.
- Underground cables shall be installed by vibratory plow or trenching.
- The trench shall be backfilled with the excavated soil material immediately following cable installation.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.
- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.

- Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

	Exempt	Allowable	Allowable with Mitigation	Prohibited
Vegetation management: • Emergency fire control measures provided that topography is restored • Periodic mowing and harvesting of plant products in Zone 2 only • Planting vegetation to enhance the riparian buffer • Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised • Removal of individual trees which are in danger of causing damage to dwellings, other structures or human life • Removal or poison ivy • Removal of understory nuisance vegetation as defined in: Smith, Cherri L. 1998. Exotic Plant Guidelines. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30	X X X X X X X			
Water dependent structures as defined in 15A NCAC 2B .0202		X		
Water supply reservoirs: • New reservoirs provided that a riparian buffer that meets the requirements of Items (4) and (5) is established adjacent to the reservoir • New reservoirs where a riparian buffer that meets the requirements of Items (4) and (5) is NOT established adjacent to the reservoir		X	X	
Water wells	X			
Wetland restoration	X			

(7) REQUIREMENTS FOR CATEGORIES OF USES. Uses designated as exempt, allowable, allowable with mitigation and prohibited in Item (6) of this Paragraph shall have the following requirements:

(a) EXEMPT. Uses designated as exempt are allowed within the riparian buffer. Exempt uses shall be designed, constructed and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable. In addition, exempt uses shall meet requirements listed in Item (6) of this Paragraph for the specific use.

(b) ALLOWABLE. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this Paragraph. These uses require written authorization from the Division or the delegated local authority.

(c) ALLOWABLE WITH MITIGATION. Uses designated as allowable with mitigation may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this Paragraph and an appropriate mitigation strategy has been approved pursuant to Item (10) of this Paragraph. These uses require written authorization from the Division or the delegated local authority.

(d) PROHIBITED. Uses designated as prohibited may not proceed within the riparian buffer unless a variance is granted pursuant to Item (9) of this Paragraph. Mitigation may be required as one condition of a variance approval.

(8) DETERMINATION OF "NO PRACTICAL ALTERNATIVES." Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to the Division or to the delegated local authority. The applicant shall certify that the criteria identified in Sub-Item (8)(a) of this Paragraph are met. The Division or the delegated local authority shall grant an Authorization Certificate upon a "no practical alternatives" determination. The procedure for making an Authorization Certificate shall be as follows:

(a) For any request for an Authorization Certificate, the Division or the delegated local authority shall review the entire project and make a finding of fact as to whether the following requirements have been met in support of a "no practical alternatives" determination:

(i) The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(ii) The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(iii) Best management practices will be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(b) Requests for an Authorization Certificate shall be reviewed and either approved or denied within 60 days of receipt of a complete submission based on the criteria in Sub-Item (8)(a) of this Paragraph by either the Division or the delegated local authority. Failure to issue an approval or denial within 60 days shall constitute that the applicant has demonstrated "no practical alternatives." The Division or the delegated local authority may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of the riparian buffer protection program. Complete submissions shall include the following:

(i) The name, address and phone number of the applicant;

(ii) The nature of the activity to be conducted by the applicant;

(iii) The location of the activity, including the jurisdiction;

(iv) A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;

(v) An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and

(vi) Plans for any best management practices proposed to be used to control the impacts associated with the activity.

(c) Any disputes over determinations regarding Authorization Certificates shall be referred to the Director for a decision. The Director's decision is subject to review as provided in Articles 3 and 4 of G. S. 150B.

(9) VARIANCES. Persons who wish to undertake uses designated as prohibited have the option of pursuing a variance. The Division or the appropriate delegated local authority may grant minor variances. The variance request procedure shall be as follows:

(a) For any variance request, the Division or the delegated local authority shall make a finding of fact as to whether the following requirements have been met:

(i) There are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of the riparian buffer protection requirements. Practical difficulties or unnecessary hardships shall be evaluated in accordance with the following:

(A) If the applicant complies with the provisions of this Rule, he/she can secure no reasonable return from, nor make reasonable use of, his/her property. Merely proving that the variance would permit a greater profit from the property will not be considered adequate justification for a variance.

Moreover, the Division or delegated local authority shall consider whether the variance is the minimum possible deviation from the terms of this Rule that will make reasonable use of the property possible.

(B) The hardship results from application of this Rule to the property rather than from other factors such as deed restrictions or other hardship.

(C) The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, which is different from that of neighboring property.

(D) The applicant did not cause the hardship by knowingly or unknowingly violating this Rule, or by purchasing the property after the effective date of this Rule, and then requesting an appeal.

(E) The hardship is unique to the applicant's property, rather than the result of conditions that are widespread. If other properties are equally subject to the hardship created in the restriction, then granting a variance would be a special privilege denied to others, and would not promote equal justice.

(ii) The variance is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and preserves its spirit; and

(iii) In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

(b) MINOR VARIANCES. A minor variance request pertains to activities that are proposed only to impact any portion of Zone 2 of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Sub-Item (9)(a) of this Paragraph by the either the Division or the delegated local authority pursuant to G.S. 153A-Article 18, or G.S. 160A-Article 19. The Division or the delegated local authority may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Requests for appeals of decisions made by the Division shall be made to the Office of Administrative Hearings. Request for appeals made by the delegated local authority shall be made to the appropriate Board of Adjustment under G.S. 160A-388 or G.S. 153A-345.

(c) MAJOR VARIANCES. A major variance request pertains to activities that are proposed to impact any portion of Zone 1 or any portion of both Zones 1 and 2 of the riparian buffer. If the Division or the delegated local authority has determined that a major variance request meets the requirements in Sub-Item (9)(a) of this Paragraph, then it shall prepare a preliminary finding and submit it to the Commission. Preliminary findings on major variance requests shall be reviewed by the Commission within 90 days after receipt by the Director. Requests for appeals of determinations that the requirements of Sub-Item (9)(a) of this Paragraph have not been met shall be made to the Office of Administrative

Hearings for determinations made by the Division or the appropriate Board of Adjustments under G.S. 160A-388 or G.S. 153A-345 for determinations made by the delegated local authority. The purpose of the Commission's review is to determine if it agrees that the requirements in Sub-Item (9)(a) of this Paragraph have been met. Requests for appeals of decisions made by the Commission shall be made to the Office of Administrative Hearings. The following actions shall be taken depending on the Commission's decision on the major variance request:

(i) Upon the Commission's approval, the Division or the delegated local authority shall issue a final decision granting the major variance.

(ii) Upon the Commission's approval with conditions or stipulations, the Division or the delegated local authority shall issue a final decision, which includes these conditions or stipulations.

(iii) Upon the Commission's denial, the Division or the delegated local authority shall issue a final decision denying the major variance.

(10) MITIGATION. Persons who wish to undertake uses designated as allowable with mitigation shall meet the following requirements in order to proceed with their proposed use.

(a) Obtain a determination of "no practical alternatives" to the proposed use pursuant to Item (8) of this Paragraph.

(b) Obtain approval for a mitigation proposal pursuant to 15A NCAC 2B .0242.

(c) For wetland buffers, obtain approval for a mitigation proposal pursuant to 15A NCAC 2H .0506(h).

(11) REQUIREMENTS SPECIFIC TO FOREST HARVESTING. The following requirements shall apply for forest harvesting operations and practices.

(a) The following measures shall apply in the entire riparian buffer:

(i) Logging decks and sawmill sites shall not be placed in the riparian buffer.

(ii) Access roads and skid trails shall be prohibited except for temporary and permanent stream crossings established in accordance with 15A NCAC 1I .0203. Temporary stream crossings shall be permanently stabilized after any site disturbing activity is completed.

(iii) Timber felling shall be directed away from the stream or water body.

(iv) Skidding shall be directed away from the stream or water body and shall be done in a manner that minimizes soil disturbance and prevents the creation of channels or ruts.

(v) Individual trees may be treated to maintain or improve their health, form or vigor.

(vi) Harvesting of dead or infected trees or application of pesticides necessary to prevent or control extensive tree pest and disease infestation shall be allowed. These

practices must be approved by the Division of Forest Resources for a specific site. The Division of Forest Resources must notify the Division of all approvals.

(vii) Removal of individual trees that are in danger of causing damage to structures or human life shall be allowed.

(viii) Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer shall be allowed provided that soil disturbance is minimized. Plantings shall consist primarily of native species.

(ix) High intensity prescribed burns shall not be allowed.

(x) Application of fertilizer shall not be allowed except as necessary for permanent stabilization. Broadcast application of fertilizer or herbicides to the adjacent forest stand shall be conducted so that the chemicals are not applied directly to or allowed to drift into the riparian buffer.

(b) In Zone 1, forest vegetation shall be protected and maintained. Selective harvest as provided for below is allowed on forest lands that have a deferment for use value under forestry in accordance with G.S. 105-277.2 through 277.6 or on forest lands that have a forest management plan prepared or approved by a registered professional forester. Copies of either the approval of the deferment for use value under forestry or the forest management plan shall be produced upon request. For such forest lands, selective harvest is allowed in accordance with the following:

(i) Tracked or wheeled vehicles are not permitted except at stream crossings designed, constructed and maintained in accordance with 15A NCAC 1I .0203.

(ii) Soil disturbing site preparation activities are not allowed.

(iii) Trees shall be removed with the minimum disturbance to the soil and residual vegetation.

(iv) The following provisions for selective harvesting shall be met:

(A) The first 10 feet of Zone 1 directly adjacent to the stream or waterbody shall be undisturbed except for the removal of individual high value trees as defined provided that no trees with exposed primary roots visible in the streambank be cut.

(B) In the outer 20 feet of Zone 1, a maximum of 50 percent of the trees greater than five inches dbh may be cut and removed. The reentry time for harvest shall be no more frequent than every 15 years, except on forest plantations where the reentry time shall be no more frequent than every five years. In either case, the trees remaining after harvest shall be as evenly spaced as possible.

(C) In Zone 2, harvesting and regeneration of the forest stand shall be allowed provided that sufficient ground cover is maintained to provide for diffusion and infiltration of surface runoff.

(12) REQUIREMENTS SPECIFIC TO LOCAL GOVERNMENTS WITH STORMWATER PROGRAMS FOR NITROGEN CONTROL. Local governments that are required to have local stormwater programs pursuant to 15A NCAC 2B .0235 shall have two options for ensuring protection of riparian buffers on new developments within their jurisdictions as follows.

(a) Obtain authority to implement a local riparian buffer protection program pursuant to 15A NCAC 2B .0241.

(b) Refrain from issuing local approvals for new development projects unless either:

(i) The person requesting the approval does not propose to impact the riparian buffer of a surface water that appears on either the most recent versions of the soil survey maps prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent versions of the 1:24,000 scale (7.5 minute quadrangle) topographic maps prepared by the United States Geologic Survey (USGS).

(ii) The person requesting the approval proposes to impact the riparian buffer of a surface water that appears on the maps described in Sub-Item (12)(b)(i) of this Paragraph and either:

(A) Has received an on-site determination from the Division pursuant to Sub-Item (3)(a) of this Paragraph that surface waters are not present;

(B) Has received an Authorization Certificate from the Division pursuant to Item (8) of this Paragraph for uses designated as Allowable under this Rule;

(C) Has received an Authorization Certificate from the Division pursuant to Item (8) of this Paragraph and obtained the Division's approval on a mitigation plan pursuant to Item (10) of this Paragraph for uses designated as Allowable with Mitigation under this Rule; or

(D) Has received a variance from the Commission pursuant to Item (9) of this Paragraph.

(13) OTHER LAWS, REGULATIONS AND PERMITS. In all cases, compliance with this Rule does not preclude the requirement to comply with all federal, state and local regulations and laws.

History Note: *Authority 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143B-242(d); S.L. 1999, c. 329.*
Temporary Adoption Eff. January11, 2000.
Eff. August 1, 2000.

15A NCAC 2B .0260 is proposed for adoption as follows:

.0260 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: MITIGATION PROGRAM FOR PROTECTION AND MAINTENANCE OF RIPARIAN BUFFERS

The following are requirements for the Riparian Buffer Mitigation Program for the Tar-Pamlico Basin:

(1) PURPOSE. The purpose of this Rule is to set forth the mitigation requirements that apply to the ~~Tar-Pamlico Basin riparian buffer protection program.~~ riparian buffer protection program in the Tar-Pamlico Basin , as described in Rule 15A NCAC 2B .0259, and whose surface waters are described in the Schedule of Classifications, 15A NCAC 2B .0316.

(2) APPLICABILITY. This Rule applies to persons who wish to impact a riparian buffer in the Tar-Pamlico Basin when one of the following applies:

(a) A person has received an Authorization Certificate pursuant to 15A NCAC 2B .0259 for a proposed use that is designated as "allowable with mitigation."

(b) A person has received a variance pursuant to 15A NCAC 2B .0259 and is required to perform mitigation as a condition of a variance approval.

(3) THE AREA OF MITIGATION. The required area of mitigation shall be determined by either the Division or the delegated local authority according to the following:

(a) The impacts in square feet to each zone of the riparian buffer shall be determined by the Division or the delegated local authority by adding the following:

(i) The area of the footprint of the use causing the impact to the riparian buffer.

(ii) The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use.

(iii) The area of any ongoing maintenance corridors within the riparian buffer associated with the use.

(b) The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Sub-item (3)(a) of this Paragraph to each zone of the riparian buffer:

(i) Impacts to Zone 1 of the riparian buffer shall be multiplied by 3.

(ii) Impacts to Zone 2 of the riparian buffer shall be multiplied by 1.5.

(iii) Impacts to wetlands within Zones 1 and 2 of the riparian buffer that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

(4) THE LOCATION OF MITIGATION. The mitigation effort shall be located the same distance from the Pamlico River estuary as the proposed impact, or closer to the estuary than the impact, and as close to the location of the impact as feasible.

(5) ISSUANCE OF THE MITIGATION DETERMINATION. The Division or the delegated local authority shall issue a mitigation determination that specifies the required area and location of mitigation pursuant to Items (3) and (4) of this Paragraph.

(6) OPTIONS FOR MEETING THE MITIGATION DETERMINATION. The mitigation determination made pursuant to Item (5) of this Paragraph may be met through one of the following options:

(a) Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to Item (7) of this Paragraph.

(b) Donation of real property or of an interest in real property pursuant to Item (8) of this Paragraph.

(c) Restoration or enhancement of a non-forested riparian buffer ~~that is not otherwise required to be protected~~. This shall be accomplished by the applicant after submittal and approval of a restoration plan pursuant to Item (9) of this Paragraph.

(7) PAYMENT TO THE RIPARIAN BUFFER RESTORATION FUND. Persons who choose to satisfy their mitigation determination by paying a compensatory mitigation fee to the Riparian Buffer Restoration Fund shall meet the following requirements:

(a) SCHEDULE OF FEES: The amount of payment into the Fund shall be determined by multiplying the acres or square feet of mitigation determination made pursuant to Item (5) of this Paragraph by ninety-six cents per square foot or forty-one thousand, six hundred and twenty-five dollars per acre.

(b) The required fee shall be submitted to the Division of Water Quality, Wetlands Restoration Program, ~~P.O. Box 29535, Raleigh, NC 27626-0535~~ 1619 Mail Service Center, Raleigh, NC 27699-1619 prior to any activity that results in the removal or degradation of the protected riparian buffer for which a "no practical alternatives" determination has been made.

(c) The payment of a compensatory mitigation fee may be fully or partially satisfied by donation of real property interests pursuant to Item (8) of this Paragraph.

(d) The fee outlined in Sub-item (7)(a) of this Paragraph shall be reviewed every two years and compared to the actual cost of restoration activities conducted by the Department, including site identification, planning, implementation, monitoring and maintenance costs. Based upon this biennial review, revisions to Sub-item (7)(a) of this Paragraph will be recommended when adjustments to this Schedule of Fees are deemed necessary.

(8) DONATION OF PROPERTY. Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements:

(a) The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to Item (7) of this Paragraph. The value of the property interest shall be

determined by an appraisal performed in accordance with Sub-item (8)(d)(iv) of this Paragraph. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to Sub-item (7)(a) of this Paragraph, the applicant shall pay the remaining balance due.

(b) The donation of conservation easements to satisfy compensatory mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.

(c) Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:

(i) The property shall be located within an area that is identified as a priority for restoration in the Basinwide Wetlands and Riparian Restoration Plan or shall be located at a site that is otherwise consistent with the goals outlined in the Basinwide Wetlands and Riparian Restoration Plan.

(ii) The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration.

(iii) The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.

(iv) The size of the restorable riparian buffer on the property to be donated shall equal or exceed the acreage of riparian buffer required to be mitigated under the mitigation responsibility determined pursuant to Item (3) of this Paragraph.

(v) The property shall not require excessive measures for successful restoration, such as removal of structures or infrastructure. Restoration of the property shall be capable of fully offsetting the adverse impacts of the requested use;

(vi) The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;

(vii) The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and land acquisition costs.

(ix) The property shall not contain cultural or historic resources.

(x) The property shall not contain any hazardous substance or solid waste.

(xi) The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water or sewer connections exist, they shall be filled, remediated or closed at owner's expense in accordance with state and local health and safety regulations.

(xii) The property shall have the potential to remove nitrogen, improve water quality and enhance natural resources after restoration. The Division shall consider whether the property is adjacent to or includes:

(A) a Department-approved restoration or preservation project or public lands;

(B) a sensitive natural resource, as identified in the Basinwide Wetland and Riparian Restoration Plan;

(C) known occurrences of rare species as identified by the North Carolina Natural Heritage Program in the "Natural Heritage Program List of Rare Animal Species of North Carolina" or the "Natural Heritage Program List of the Rare Plant Species of North Carolina;"

(D) significant Natural Heritage Area as identified by the North Carolina Natural Heritage Program in the "North Carolina Natural Heritage Program Biennial Protection Plan, List of Significant Natural Heritage Areas." Copies of these documents may be obtained from the Department of Environment and Natural Resources, Division of Parks and Recreation, Natural Heritage Program, ~~P.O. Box 27687, Raleigh, North Carolina 27611~~ 1615 Mail Service Center, Raleigh, NC 27699-1615;

(E) federally or state-listed sensitive, endangered, or threatened species, or their critical habitat;

(F) non-supporting, partially supporting, or support-threatened waters as designated by the Division pursuant to 40 CFR 131.10(a) through (g). This material is available at the Department of Environment and Natural Resources, Division of Water Quality, Water Quality Section, 512 North Salisbury Street, Raleigh, North Carolina ~~27604~~ , or by mail at 1617 Mail Service Center, Raleigh, NC 27699-1617;

(xiii) The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort.

(xiv) The property shall not have any encumbrances or conditions on the transfer of the property interests.

(d) At the expense of the applicant or donor, the following information shall be submitted to the Division with any proposal for donations or dedications of interest in real property:

(i) Documentation that the property meets the requirements laid out in Sub-Item (8)(c) of this Paragraph.

(ii) US Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, USDA Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with

information on existing site conditions, vegetation types, presence of existing structures and easements.

(iii) A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the State Board of Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609.

(iv) A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734.

(v) A title certificate.

(9) RIPARIAN BUFFER RESTORATION OR ENHANCEMENT. Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:

(a) The applicant may restore or enhance a riparian buffer that is not protected under the State's riparian buffer protection program if either of the following applies:

(i) The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Item (3) of this Paragraph.

(ii) The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Item (3) of this Paragraph.

(b) The location of the riparian buffer restoration or enhancement shall comply with the requirements in Item (4) of this Paragraph.

(c) The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.

(d) The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of 15A NCAC 2B .0233. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the Division. The restoration or enhancement plan shall contain the following.

(i) A map of the proposed restoration or enhancement site.

(ii) A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity.

(iii) A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer.

(iv) A fertilization plan.

(v) A schedule for implementation.

(e) Within one year after the Division has approved the restoration or enhancement plan, the applicant shall present proof to the Division that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of the State's or the delegated local authority's riparian buffer protection program.

(f) The mitigation area shall be placed under a perpetual conservation easement whose terms are acceptable to the Division.

(g) The applicant shall submit annual reports for a period of five years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall be responsible for replacing trees that do not survive and for restoring diffuse flow if needed during that five-year period.

History Note: *Authority 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143B-242(d); S.L. 1999, c. 329.*
Temporary Adoption Eff. January 11, 2000.
Eff. August 1, 2000.

15A NCAC 2B .0261 is proposed for adoption as follows:

.0261 TAR-PAMLICO RIVER BASIN - NUTRIENT SENSITIVE WATERS MANAGEMENT STRATEGY: DELEGATION OF AUTHORITY FOR THE PROTECTION AND MAINTENANCE OF EXISTING RIPARIAN BUFFERS

This Rule sets out the following requirements for delegation of the responsibility for implementing and enforcing the Tar-Pamlico Basin riparian buffer protection program, as described in Rule 15A NCAC 2B .0259, to local governments:

(1) PROCEDURES FOR GRANTING AND RESCINDING DELEGATION. The Commission shall grant and rescind local government delegation of the Tar-Pamlico River Basin Riparian Buffer Protection requirements, as described in Rule 15A NCAC 2B. 0259, according to the following procedures.

(a) Local governments within the Tar-Pamlico River Basin may submit a written request to the Commission for authority to implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements within their jurisdiction. The written request shall be accompanied by information which shows:

(i) The local government has land use jurisdiction for the riparian buffer demonstrated by delineating the local land use jurisdictional boundary on USGS 1:24,000 topographical map(s) or other appropriate scale map(s);

(ii) The local government has the administrative organization, staff, legal authority, financial and other resources necessary to implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements based on its size and projected amount of development;

(iii) The local government has adopted ordinances, resolutions, or regulations necessary to establish and maintain the Tar-Pamlico Basin riparian buffer protection requirements; and

(iv) The local government has provided a plan to address violations with appropriate remedies and actions.

(b) Within 90 days after the Commission has received the request for delegation, the Commission shall notify the local government whether it has been approved, approved with modifications, or denied.

(c) The Commission, upon determination that a delegated local authority is failing to implement or adequately enforce the Tar-Pamlico Basin riparian buffer protection requirements, shall notify the delegated local authority in writing of the local program's inadequacies. If the delegated local authority has not corrected the deficiencies within 90 days of receipt of the written notification, then the Commission shall rescind the delegation

of authority to the local government and shall implement and enforce the Tar-Pamlico Basin riparian buffer protection requirements.

(d) The Commission may delegate its duties and powers for granting and rescinding local government delegation of the Tar-Pamlico Basin riparian buffer protection requirements, in whole or in part, to the Director.

(2) APPOINTMENT OF A RIPARIAN BUFFER PROTECTION ADMINISTRATOR. Upon receiving delegation, local governments shall appoint a Riparian Buffer Protection Administrator who shall coordinate the implementation and enforcement of the program. The Administrator shall attend an initial training session by the Division and subsequent annual training sessions. The Administrator shall ensure that local government staff working directly with the program receive training to understand, implement and enforce the program.

(3) PROCEDURES FOR USES WITHIN RIPARIAN BUFFERS THAT ARE ALLOWABLE AND ALLOWABLE WITH MITIGATION. Upon receiving delegation, local authorities shall be responsible for reviewing proposed uses within the riparian buffer and issuing approvals if the uses meet the Tar-Pamlico Basin riparian buffer protection requirements. Delegated local authorities shall issue an Authorization Certificate for uses if the proposed use meets the Tar-Pamlico Basin riparian buffer protection requirements, or provides for appropriate mitigated provisions to the Tar-Pamlico Basin riparian buffer protection requirements. The Division shall have the authority to challenge a decision made by a delegated local authority for a period of 30 days after the Authorization Certificate is issued. If the Division does not challenge an Authorization Certificate within 30 days of issuance, then the delegated local authority's decision will stand.

(4) VARIANCES. After receiving delegation, local governments shall be responsible for reviewing variance requests, providing approvals for minor variance requests and making recommendations to the Commission for major variance requests pursuant to the Tar-Pamlico Basin riparian buffer protection program.

(5) LIMITS OF DELEGATED LOCAL AUTHORITY. The Commission shall have jurisdiction to the exclusion of local governments to implement the Tar-Pamlico Basin riparian buffer protection requirements for the following types of activities:

(a) Activities conducted under the authority of the State;

(b) Activities conducted under the authority of the United States;

(c) Activities conducted under the authority of multiple jurisdictions;

(d) Activities conducted under the authority of local units of government.

(6) RECORD-KEEPING REQUIREMENTS. Delegated local authorities are required to maintain on-site records for a minimum of 5 years. Delegated local authorities must furnish a copy of these records to the Director within 30 days of receipt of a written request for the records. The Division will inspect local riparian buffer protection programs to ensure that the programs are

being adequately implemented and enforced. Each delegated local authority's records shall include the following:

(a) A copy of variance requests;

(b) The variance request's finding of fact;

(c) The result of the variance proceedings;

(d) A record of complaints and action taken as a result of the complaint;

(e) Records for stream origin calls and stream ratings; and

(f) Copies of request for authorization, records approving authorization and Authorization Certificates.

History Note: *Authority G. S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143B-242(d); S.L. 1999, c. 329.*
Temporary Adoption Eff. January 11, 2000.
Eff. August 1, 2000.

Announcement of Public Hearings

ANNOUNCEMENT OF PUBLIC HEARINGS AND COMMENT PERIOD FOR TAR-PAMLICO RIVER BASIN NUTRIENT RULE-MAKING

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

Hearings have been scheduled on proposed rules for the Tar-Pamlico River Basin. These rules would control inputs of nutrients from nonpoint, or runoff-related, sources to the Pamlico River estuary. Hearings are set for the following dates and places:

Tuesday, August 31, 7:00 pm

Greenville, NC
Pitt County Agriculture Extension Auditorium
Pitt County Extension Center
403 Government Circle
On Old Creek Rd. on the north side of S.R. 33 east of U.S. 13

Thursday, September 2, 7:00 pm

Nashville, NC
Nash County Agriculture Center Auditorium
Ag Center Drive
On the north side of U.S. 64 Business (Eastern Ave.)

Nash County Extension office: 252-459-9810

Why are Public Hearings Being Held?

The Pamlico River estuary below Washington has had a history of nutrient-related water quality problems as evidenced by excessive algal blooms, low dissolved oxygen, and fish kills. To curb these problems, the state is proposing new rules that are intended to reduce the levels of nutrients entering the river.

What Has Been Done Before Now?

In 1989, the North Carolina Environmental Management Commission (EMC) designated the Tar-Pamlico River basin as "Nutrient Sensitive Waters". The EMC initially adopted a strategy that required nutrient reductions from wastewater treatment plants and other "point sources". The EMC recognized the need to address nonpoint, or runoff-related, nutrient sources, and called for the development of more data to characterize these sources to guide its decisions. Meanwhile, farmers implemented Best Management Practices voluntarily with help from the state's agriculture cost share program. In 1994, based on the additional data analysis, the EMC established overall goals of a 30 percent reduction in nitrogen inputs and holding of phosphorus loads at 1991 levels. At that time, the EMC expanded the strategy to include all nonpoint source categories, such as agriculture, urban stormwater, forestry, on-site wastewater, and others, but kept new actions voluntary in nature.

In September 1998, the EMC determined that progress under the voluntary approach was insufficient and that mandatory nonpoint measures were needed to reach the nutrient goals. A rule-making process began in November 1998, when the Division of Water Quality (DWQ) convened 7 stakeholder teams over 4 months to develop rule concepts and language. Four of the stakeholder teams proposed rules to address agricultural and urban nonpoint sources of nutrients. Four teams proposed other actions by the EMC to improve understanding of and funding for management of nonpoint sources such as onsite wastewater, construction, and atmospheric emissions of ammonia. In May 1999, the EMC approved moving forward with the public comment phase on the stakeholders' proposed rule subjects, including an initial comment period on the subject of atmospheric emissions of ammonia. This first comment period ran from June 1 to July 30, 1999. In July 1999, the EMC approved public hearings and a comment period on the rules proposed by the stakeholder teams.

What Will Happen at the Public Hearings?

The Division of Water Quality has scheduled two public hearings on behalf of the EMC to share the proposed nonpoint source rules with interested people and to receive public comments. The agenda for the hearings is as follows:

- *Introductory Remarks:* A Hearing Officer who is a member of the NC Environmental Management Commission will conduct both hearings. The Hearing Officer will explain the reason and authority for the hearing and provide ground rules. (5 minutes)
- *Staff Presentation:* Division of Water Quality staff will present more information on the nature of the nutrient problem, actions taken to reduce nutrients so far, rule mandate & objectives, and a summary of each rule. (15 minutes)
- *Open Question & Answer Session with Water Quality Staff.* (up to 1 hour)
- *Comments from the Public:* You will have opportunity to provide oral or written comments and suggestions. Depending on the number of people wishing to speak, it may be necessary to place a time limit, usually 3 minutes, on each speaker. Comments will be recorded to compile a record of the hearing. The public may also provide written comments to Division of Water Quality staff. (Open-ended)

What Will Happen After the Hearings?

Your comments can help to make the final set of rules and the overall strategy a better solution for all parties involved. Water Quality staff will compile all comments received during the two 60-day public comment periods from June 1, 1999 through September 30, 1999, including oral comments received at the hearings. We will provide these comments to the Hearing Officers. The Hearing Officers will hold a series of meetings with Water Quality staff, and discuss in detail all issues raised by the public. Hearing Officers will decide on changes to recommend to the draft rules. Water Quality staff will present these recommendations to the full Environmental Management Commission for adoption. Adoption is currently scheduled for the December 9, 1999 EMC meeting, which will be in the Ground Floor Hearing Room of the Archdale Building in downtown Raleigh. The public is welcome, but there is normally no public comment opportunity at these meetings.

How Can I Prepare and Participate?

You are encouraged to learn about the rules and express your concerns. The rules are described briefly below. DWQ staff has also prepared other information to clarify the content of the rules and the rule-making process. The following documents are available:

- ***Draft Text of Rules:*** The actual text of the proposed rules for agriculture, urban stormwater, nutrient management, and riparian buffer protection. (45 pages)
- ***Rule Summaries:*** One-page summaries of each of the proposed rule subjects, 4 total. (4 pages)
- ***Q&A:*** Frequently asked questions about the proposed Tar-Pamlico rules, and responses from DWQ staff. (3 pages)
- ***Notice of Intent to Consider Adoption of Temporary Rules for Protection of Riparian Buffers:*** Comment process on the subject of whether the EMC should adopt temporary buffer rules. (1 page)
- ***Fiscal Analysis:*** A detailed analysis of the fiscal impacts of the proposed rules on all affected sectors. (194 pages)
- ***Overall Strategy to Date:*** The Phase II NSW Agreement that addresses point sources and the voluntary nonpoint source plan currently in effect. (178 pages)

Here are some options for obtaining this information:

- If you have internet access, you can find a copy of the draft rules, a summary of the fiscal analysis, and other information on the Tar-Pamlico NSW Strategy on the DWQ web page at http://h2o.enr.state.nc.us/nps/tarp.htm.
- If you would like to be mailed materials, please contact Marsha Byrd at 919-733-5083 ext. 558.
- You can also find the official Notice of Text of the rules and comment procedures in the August 2nd edition of the NC Register, which is provided to each county and municipality in the state.

Submitting Comments

Written comments will receive just as much attention as oral ones. You may want to attend a hearing before you send in comments; this may help clarify your concerns and allow you to express them most effectively. The comment period on the draft text of the rules will run **until September 30, 1999**.

Please submit comments to:
Rich Gannon
DENR, Division of Water Quality
Planning Branch
1617 Mail Service Center
Raleigh, NC 27699-1617

Questions?

You can direct questions about the proposed rules to Rich Gannon at (919) 733-5083 ext. 356, or rich.gannon@ncmail.net.

Summary of Proposed Nonpoint Source Nutrient Rules for Tar-Pamlico River Basin

Rules are proposed in four subject areas: agriculture, nutrient management (both agricultural and non-agricultural fertilizer application), riparian buffer protection, and urban stormwater.

Agricultural Best Management Practices

Under the proposal, persons engaging in agricultural operations in the Tar-Pamlico River Basin have **two options** for meeting the nitrogen and phosphorus loading goals. The options are to either participate in a local nutrient control strategy or implement standard Best Management Practices. The two options are as follows:

Option 1 - Local Nutrient Control Strategy
Farmers may choose to participate in the development and implementation of a countywide or watershed-wide strategy to reduce nitrogen loading by 30 percent and hold phosphorus loading to 1991 levels. Local Advisory Committees would review and approve site-specific plans for nitrogen and phosphorus, based on the overall county/watershed nitrogen and phosphorus control goals. Farmers who choose this option would be required to implement their plans within 5 years of the effective date of the rule. The Directors of the DSWC and the DWQ would solicit membership for the Local Advisory Committees from the local Soil and Water Conservation Districts (SWCD), local Natural Resources Conservation Service (NRCS), local N.C. Cooperative Extension Service (CES), Division of Soil and Water Conservation (DSWC), N.C. Department of Agriculture and Consumer Services (NCDACS), and at least two local farmers.

Option 2 - Standard Best Management Practices (BMPs)
If a farmer does not select option 1, then he must implement standard BMPs. Farmers would choose from combinations of riparian buffers of different widths and composition, water control structures, and nutrient management. Farmers who choose this option would be required to implement their plans within 4 years of the effective date of the rule.

In addition to the Local Advisory Committees, the Secretary of the Department of Environment and Natural Resources would form a Basin Oversight Committee. The Basin Oversight Committee would have the following responsibilities:

- Develop a tracking and accounting method to estimate nutrient loading from agricultural sources.
- Review and approve local nutrient control strategies and report findings to the EMC.
- Establish a technical advisory committee to monitor the science on phosphorus and evaluate the need for specific management actions to meet the phosphorus loading goal.

The Secretary would solicit membership for the Basin Oversight Committee from NRCS, DSWC, NCDACS, CES, DWQ, the environmental community, the scientific community, and agricultural interests.

Nutrient Management Requirements

Under this proposal, certain people who are involved in application of fertilizer to lands in the basin have two options, as follows:
Option 1: successfully complete nutrient management training and certification provided by the Extension Service or DWQ within 5 years of the effective date of the rule, -OR-
Option 2: develop and implement nutrient management plans for the lands where they apply nutrients. Nutrient management plans must meet certain technical criteria based on the type of operation.

The rule would apply to the following people:

- People who own or manage golf courses, recreational lands, rights-of-way, other turfgrass areas, and
- People who own or manage lawns or gardens in residential, commercial, or industrial property, except for residential landowners who fertilize their own property, and
- Applicators and consultants hired by any of the above people, including residential landowners.

The rule would also apply to people under one of the two following alternatives:
Alternative 1:

- People who own or manage at least 50 acres of floriculture or greenhouse areas, and
- People who own or manage at least 50 acres of cropland who have not developed a nutrient management plan under the agriculture rule.
- Applicators and consultants hired by any of the above people.

-OR-

Alternative 2:

- People who own or manage commercial floriculture or greenhouse areas, and
- People who own or manage commercial cropland who have not developed a nutrient management plan under the agriculture rule.
- Applicators and consultants hired by any of the above people.

These two alternatives are being offered for public comment. The EMC will determine a single set of applicability requirements for agricultural nutrient management based on these comments and on the recommendations of the Hearing Officers.

Urban Stormwater Requirements

The proposed rule would require local governments to implement stormwater management programs that include certain minimum elements. Local programs would require all new development to achieve the nitrogen and phosphorus loading goals, and no net increase in peak flow from the pre-development 1-year, 24-hour storm. Local programs would also include public education, mapping, identification and removal of illegal discharges, prioritization of sites for installing stormwater practices in areas of existing development, and annual nutrient load reporting. These programs would be implemented as early as two and one-half years after the effective date of the rule, and the local governments would be responsible for compliance and enforcement activities.

The following local governments would be affected by the proposed rule: 6 municipalities (Greenville, Henderson, Oxford, Rocky Mount, Tarboro, and Washington) and 6 counties (Beaufort, Edgecombe, Franklin, Halifax, Nash, and Pitt). In addition, the rule sets population thresholds of 5,000 for municipalities and 30,000 for counties; as local governments exceed these thresholds, they would be subject to the rule.

Protection and Maintenance of Existing Riparian Buffers

These rules would require that **existing** vegetated riparian (streamside) areas in the basin be protected and maintained on both sides of intermittent and perennial streams, lakes, ponds, and estuarine waters. **This rule does not establish new buffers unless the existing use changes.** The footprints of existing uses such as agriculture, buildings, industrial, commercial, and transportation facilities, maintained lawns, utility lines, and on-site wastewater systems are exempt. A total of 50 feet of riparian area is required on each side of these waterbodies. Within this 50 feet, the first 30 feet is to remain undisturbed with the exception of certain activities. The outer 20 feet must be vegetated, but certain additional uses are allowed in this zone 2. Certain specific activities are identified in the rule as "exempt", "allowable", "allowable with mitigation", or "prohibited". Examples of "exempt" activities include driveway and utility crossings of a certain size through zone 1, and grading and revegetation in zone 2. "Allowable" and "allowable with mitigation" activities require review by DWQ staff, and include activities such as new ponds in drainageways and road crossings. A separate buffer mitigation rule establishes requirements for activities that DWQ staff determines are "allowable with mitigation".

Local governments may request delegation from the state to implement this rule, as spelled out in a separate buffer program delegation rule. In the basin's larger urban areas, protection of existing riparian areas would also be a component of the urban stormwater programs discussed above.

Announcement of Public Hearings for Temporary Buffer Protection Rules

State May Consider Adopting Temporary Rules for Protection of Riparian Buffers in the Tar-Pamlico River Basin

The NC Environmental Management Commission (EMC) is currently considering adoption of permanent rules* for protection of riparian buffers in the Tar-Pamlico River Basin. The Department of Environment and Natural Resources plans to request that the EMC also consider adopting these rules on a temporary basis to provide interim protection for riparian areas in the basin while the permanent rules undergo a full rule-making process. Protection of riparian buffers would help minimize runoff-related nutrient inputs to streams, and these measures are being considered as part of the Basin's Nutrient Sensitive Waters Strategy.

Purpose of this Announcement: To encourage those interested in the concept of adopting **temporary rules** for riparian buffer protection to provide oral or written comments on this subject, as well as on the content of the rules themselves. If the EMC agrees to consider adopting these temporary rules, public comments will inform its decision process. An abbreviated Notice of Intent to consider adoption of temporary rules will be published in the September 1, 1999 NC Register, 14:5. A comment period will be open for 30 days, through September 30th.

Public Hearings
The Division of Water Quality has scheduled two public hearings on proposed nonpoint source rules, including riparian buffer protection, at the following dates and places. At the hearings, the public will have opportunity to provide oral or written comments on both the permanent and temporary rules.

Tuesday, August 31, 7:00 pm	Thursday, September 2, 7:00 pm
Greenville, NC Pitt County Agriculture Extension Auditorium Pitt County Extension Center 403 Government Circle On Old Creek Rd. on the north side of S.R. 33 east of U.S. 13	Nashville, NC Nash County Agriculture Center Auditorium Ag Center Drive On the north side of U.S. 64 Business (Eastern Ave.) Nash County Extension office: 252-459-9810

Written Comments: Please submit written comments to Rich Gannon, DENR, Division of Water Quality, Planning Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617. Questions may be directed to Rich Gannon at (919) 733-5083 ext. 356, or rich_gannon@h2o.enr.state.nc.us.

Information: Here are some options for obtaining a copy of the proposed buffer protection rules and the other proposed nonpoint source nutrient rules:

- If you have internet access, you can find a copy of the rules and other information on the Tar-Pamlico Nutrient Strategy on the Division of Water Quality web site at http://h2o.enr.state.nc.us/nps/tarp.htm.
- If you would like to receive materials by US mail, please contact Marsha Byrd, DWQ Planning Branch, at 919-733-5083 ext. 558.
- You can also find the rules and comment procedures in the NC Register notice mentioned below, which is provided to each county and municipality in the state.

Copy of the Clean Water Act of 1999, House Bill 1160

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 1999

SESSION LAW 1999-329
HOUSE BILL 1160

AN ACT TO ENACT THE CLEAN WATER ACT OF 1999.

The General Assembly of North Carolina enacts:

PART I. TITLE.

Section 1.1. This act shall be known as the "Clean Water Act of 1999".

(Parts II through VI omitted for brevity)

PART VII. AUTHORIZE TEMPORARY RULES TO PROTECT THE CAPE FEAR, CATAWBA, AND TAR-PAMLICO RIVER BASINS.

Section 7.1. Notwithstanding G.S. 150B-21.1(a)(2) and Section 8.6 of S.L. 1997-458, the Environmental Management Commission may adopt temporary rules as provided in this section to protect water quality standards and uses as required to implement basinwide water quality management plans for the Cape Fear, Catawba, and Tar-Pamlico River Basins pursuant to G.S. 143-214.1, 143-214.7, 143-215.3, and 143B-282. Prior to the adoption of a temporary rule under this subsection, the Commission shall:

(1) Consult with persons who may be interested in the subject matter of the temporary rule during the development of the text of the proposed temporary rule.

(2) Publish a notice of intent to adopt a temporary rule in the North Carolina Register. The notice shall set out the text of the proposed temporary rule and include the name of the person to whom questions and written comment on the proposed rule may be submitted. The Commission shall accept written comment on the proposed temporary rule for at least 30 days after the notice of intent to adopt the

temporary rule is published in the North Carolina Register.

(3) Hold a public hearing on the proposed temporary rule in the river basin to which the proposed temporary rule applies.

Section 7.2. Notwithstanding 26 NCAC 2C.0102(11), Section 7.1 of this act shall continue in effect until 1 July 2001.

Section 7.3. This Part shall not be construed to invalidate any development and implementation of basinwide water quality management plans by the Environmental Management Commission and the Department of Environment and Natural Resources that has occurred prior to the date this Part becomes effective.

(Parts VIII through XIII omitted for brevity)

In the General Assembly read three times and ratified this the 20th day of July, 1999.

s/ Dennis A. Wicker
President of the Senate

s/ James B. Black
Speaker of the House of Representatives

s/ James B. Hunt, Jr.
Governor

Approved 10:52 a.m. this 21st day of July, 1999