The following requirements apply to all persons in the Neuse River Basin who engage in agricultural operations. Agricultural operations are activities which relate to the production of crops, livestock, and poultry.

(1) All persons engaging in agricultural operations in the Neuse River Basin shall collectively achieve and maintain a 30 percent net total nitrogen loading reduction from the cumulative average 1991-1995 nitrogen loadings within five years from the effective date of this Rule. Persons subject to this Rule are provided with two options for meeting the requirements of this Rule. The first option is to sign-up for and participate in implementing a collective local strategy for agricultural nitrogen reduction as described in Item (7) of this Rule. This option allows site-specific plans to be developed for those operations where further nitrogen reduction practices are necessary to achieve the collective reduction goal. The second option requires the implementation of standard Best Management Practices as specified in Item (8) of this Rule. Failure to meet requirements of this Rule may result in imposition of enforcement measures as authorized by G.S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S. 143-215.6C (injunctive relief).

(2) Formation and membership of the Basin Oversight Committee. The Environmental Management Commission shall delegate to the Secretary of the Department of Environment and Natural Resources the responsibility of forming a Basin Oversight Committee.

(a) The Secretary shall solicit one nomination for membership on this Committee from each of the following agencies:

(i) Division of Soil and Water Conservation,
(ii) United States Department of Agriculture- Natural Resources Conservation Service,
(iii) North Carolina Department of Agriculture,
(iv) North Carolina Cooperative Extension Service, and
(v) Division of Water Quality.

(b) The Secretary shall also solicit one nomination that represents environmental interests, one nomination that represents agricultural interests, and one from the scientific community with experience related to water quality problems in the Neuse River Basin.

(c) The Secretary, Department of Environment and Natural Resources, shall appoint members of the Basin Oversight Committee from the nominees provided in Sub-Items (2)(a) and (2)(b) of this Rule. Members shall be appointed for a term not to exceed five years and shall serve at the pleasure of the Secretary. The United States Department of Agriculture-Natural Resources Conservation Service member shall serve in an "ex-officio" non-voting capacity and shall function as a technical program advisor to the Committee.

(3) Role of the Basin Oversight Committee. The Environmental Management Commission shall delegate the following responsibilities to the Basin Oversight Committee.

(a) Develop a tracking and accounting methodology, as described below, for evaluating total nitrogen loading from agricultural operations and progress toward reaching the total nitrogen net loading reduction from the implementation BMPs within the Neuse River Basin. The accountability methodology must demonstrate how the nitrogen loading reduction can be met collectively by implementing best management practices approved by the Soil and Water Conservation Commission that include, but are not limited to, water control structures, riparian area establishment, and nutrient management.

(b) Submit a draft accountability process in accordance with the requirements in Sub-Items (3)(a) and (3)(c) of this Rule to the Environmental Management Commission for review within six months after the effective date of the rule and the final accountability process to the Environmental Management Commission for approval within one year after the effective date of the rule. The Environmental Management Commission shall approve the accountability process if it meets requirements in Sub-Items (3)(a) and (3)(c) of this Rule. If the Basin Oversight Committee fails to submit an approvable accountability process to the Environmental Management Commission, then the Environmental Management Commission may accept alternative accountability process proposals within 15 months of the effective date of this Rule. If the Environmental Management Commission fails to receive an approvable accountability process, then the Environmental Management Commission may require all agricultural operations to follow the standard Best Management Practices option as specified in Item (8) of this Rule.

(c) Include in the accountability process a method to accurately track implementation of BMPs, including location and type of BMPs; to estimate
nitrogen reductions from BMP implementation; to quantify increases or
decreases in nitrogen loading due to changes in land use, modified agricultural
activity, or atmospheric nitrogen loading, based on the best available scientific
information; to ensure operation and maintenance of BMPs, including year
round management for water control structures; to address life expectancy of
BMPs; and a method to ensure maintenance of the nitrogen net loading reduction
after the initial five years of this Rule, including substitute BMPs to replace
expired practices and additional BMPs to offset new sources of nitrogen.

(d) Calculate a separate total nitrogen loading for agricultural lands in the Neuse
River Basin above and below New Bern based on the average of 1991-1995
conditions. Based on this loading, calculate a separate 30 percent net reduction.
Loading calculations must include atmospheric emissions and deposition of
nitrogen from agricultural lands based on the best available scientific
information. Allocate to counties or watersheds, as allowed in Sub-Item (4)(a)
of this Rule, within the Neuse River Basin their portion of the calculated
nitrogen loading reduction from agricultural operations, including any division
of the reduction between specific categories of agricultural operations. Each
county or watershed may not have to reduce individually its nitrogen loading by
30 percent; however, the nitrogen loading reduction from all counties or
watersheds above New Bern shall collectively meet their total nitrogen reduction
and all counties or watersheds below New Bern shall collectively meet their total
nitrogen reduction. If the Basin Oversight Committee fails to allocate the
nitrogen loading reductions from agricultural operations to counties or
watersheds within the Neuse River Basin, the Environmental Management
Commission may assign the agricultural nitrogen reductions based on the
approved accountability process as described in Sub-Items (3)(a) and (3)(c) of
this Rule.

(e) Review, approve and summarize county nitrogen reduction strategies and present
these strategies to the Environmental Management Commission for approval
within two years from the effective date of this Rule.

(f) Review, approve and summarize local nitrogen reduction annual reports and
present these reports to the Environmental Management Commission each
October. Information to be included in the Annual Report is described in Item
(5)(d) of this Rule.

(4) Formation and membership of the Local Advisory Committees. The Environmental Management
Commission shall delegate to the Directors of the Division of Water Quality and Division of Soil
and Water Conservation the responsibility of forming Local Advisory Committees.

(a) The Directors shall form Local Advisory Committees in each county (or
watershed specified by the Basin Oversight Committee) within the Neuse River
Basin. The Directors shall solicit nominations for membership on the Local
Advisory Committee from each of the following local agencies:
(i) Soil and Water Conservation District,
(ii) United States Department of Agriculture- Natural Resources
Conservation Service,
(iii) North Carolina Department of Agriculture,
(iv) North Carolina Cooperative Extension Service,
(v) North Carolina Division of Soil and Water Conservation, and
(vi) The Directors shall also solicit at least two nominations that
represents a local farmer in the county watershed.
The Soil and Water Conservation District may be designated by the Basin
Oversight Committee as the lead agency on the Local Advisory Committee.

(b) The Environmental Management Commission and Soil and Water Conservation
Commission shall appoint members of Local Advisory Committee from the
nominees provided in Sub-Item (4)(a) of this Rule and shall be appointed for a
term not to exceed five years and shall serve at the pleasure of the Commissions.

(5) Role of the Local Advisory Committees. The Environmental Management Commission shall
delegate the following responsibilities to employees of the Department who are members of the
Local Advisory Committees and employees of the Division of Soil and Water Conservation or its
designee. These employees shall act with advice from the Local Advisory Committees.

(a) Conduct a sign-up process for persons wishing to voluntarily implement the local
nitrogen reduction strategy as specified in Item (7) of this Rule. This sign-up
process shall be completed within one year following the effective date of this
Rule.

(b) Develop local nitrogen reduction strategies that meet the nitrogen loading
reduction goal for agricultural operations assigned by the Basin Oversight Committee. The local strategies shall be designed to achieve the required nitrogen loading reduction within five years from the effective date of this Rule. A matrix of best management practice options, which account for stream order, floodplain width, and regional variations in soil types and topography, may be used in developing the local nitrogen reduction strategies. Local nitrogen reduction strategies must specify the name and location of participant agricultural farming operations, BMPs which will be required as part of the plan, estimated nitrogen reduction, schedule for BMP implementation, and operation and maintenance requirements. If the Local Advisory Committee fails to develop the local nitrogen reduction strategy, the Environmental Management Commission may develop the strategy based on the tracking and accounting method approved by the Environmental Management Commission.

(c) Submit an annual report to the Basin Oversight Committee each May on net total nitrogen loading reductions from agricultural operations, the implementation of BMPs for nitrogen control, and progress towards the total nitrogen loading reduction requirements in the Neuse River Basin above and below New Bern.

(d) Include in the annual report, at a minimum, documentation on the BMPs implemented (including type and location), their costs, documentation of any expired contracts for BMPs, estimated nitrogen net loading reductions achieved as a result of those BMPs, any increases or decreases in nitrogen loading resulting from changes in land use or modified agricultural-related activity, discussion of operation and maintenance of BMPs, and a summary of the estimated load from agricultural operations for the previous year, and any modifications to the accounting methodology. Information shall be provided in the annual report on the status of BMP implementation and estimated total nitrogen reduction by all agricultural operations within the Neuse River Basin in each county or watershed. The annual report shall also be summarized separately for cropland, livestock and poultry activities.

(6) Options for meeting the collective total nitrogen net loading reduction requirement. Each agricultural operation in the Neuse River Basin shall have two options for meeting the requirements of this Rule. The options are to either implement a local nitrogen reduction strategy, specified by Item (7) of this Rule, or implement standard Best Management Practices specified by Item (8) of this Rule.

(7) Local nitrogen reduction strategy option. All persons subject to this Rule that choose to implement the county nitrogen reduction plan must complete the sign-up process that will be conducted per the requirements of Item (5)(a) of this Rule. This sign-up process will be completed within one year from the effective date of this Rule. If a person subject to this Rule does not complete the sign-up process, he shall be subject to implementation of Best Management Practices as specified in Item (8) of this Rule. Persons who choose to participate in the local nitrogen reduction strategy must commit and implement their portion of the plan within five years of the effective date of this Rule. A person may withdraw from the local nutrient reduction strategy up until the time that the local strategy is finalized by the Local Advisory Committee and the person signs the specific plan for his property, which represents his commitment to implement the plan within five years of the effective date of the rules. After a person has made the commitment to implement the local strategy by signing the plan for his property, then such persons may not withdraw from the local nitrogen reduction strategy during the initial five-year period. The local nitrogen reduction strategy is not required to be more stringent than the standard best management practice option provided that the net nitrogen reduction goals are met collectively; however, the Local Advisory Committees may develop strategies that achieve reductions of greater than 30 percent.

(8) Standard best management practice option. If a person subject to this Rule does not complete the sign-up process for implementation of the local nitrogen reduction strategy, then he shall implement the following best management practices within four years following the effective date of this Rule.

(a) A forested riparian area, as described in Sub-Item (8)(a)(i)-(ii) of this Rule, is required on all sides of surface waters in the Neuse River Basin (intermittent streams, perennial streams, lakes, ponds and estuaries) as indicated 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. Design and installation of the forested riparian area shall be such that, to the maximum extent possible, sheet flow of surface water is achieved. Any activities that would result in water quality standard violations or disrupt the structural or functional integrity of the forested riparian area are prohibited. The protected riparian area shall have two zones as follows:
(i) Zone 1 shall be undisturbed forest. Zone 1 begins at the top of bank for intermittent streams and perennial streams without tributaries and extends landward a distance of 30 feet on each side of the waterbody, measured horizontally on a line perpendicular to the waterbody. For all other waterbodies, Zone 1 begins at the top of bank or the mean high water line and extends landward a distance of 30 feet, measured horizontally on a line perpendicular to the waterbody. Forest vegetation of any width that exists in Zone 1 as of July 22, 1997 must be preserved and maintained in accordance with Sub-Items (8)(a)(i)(A)-(E) of this Rule. The application of fertilizer in Zone 1 is prohibited. The following practices and activities are allowed in Zone 1:

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

(B) Selective cutting of individual trees of high value in the outer 20 feet of Zone 1, provided that the basal area of this outer 20-foot wide area remains at or above 75 square feet per acre and is computed according to the following method. Basal area of this outer 20-foot wide area shall be computed every 100 feet along the stream to ensure even distribution of forest vegetation and shall be based on all trees measured at 4.5 feet from ground level. No tracked or wheeled equipment is allowed in Zone 1 except at stream crossings which are designed, constructed and maintained in accordance with Forest Practice Guidelines Related to Water Quality (15A NCAC 1J .0201 - .0209);

(C) Horticulture or silvicultural practices to maintain the health of individual trees;

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

(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.

(ii) Zone 2: begins at the outer edge of Zone 1 and extends landward a minimum of 20 feet as measured horizontally on a line perpendicular to the waterbody. The combined minimum width of Zones 1 and 2 shall be 50 feet on all sides of the waterbody. Vegetation in Zone 2 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. The following practices and activities are allowed in Zone 2 in addition to those allowed in Zone 1: Periodic mowing and removal of plant products such as timber, nuts, and fruit is allowed on a periodic basis provided the intended purpose of the riparian area is not compromised by harvesting, disturbance, or loss of forest or herbaceous ground cover. Forest vegetation in Zone 2 may be managed to minimize shading on adjacent land outside the riparian area if the water quality function of the riparian area is not compromised.

(iii) The following practices and activities are not allowed in Zone
1 and Zone 2:

(A) Land disturbing activities and placement of fill and other materials, other than those allowed in Items (8)(a)(i) and (8)(b) of this Rule;

(B) New development;

(C) New on-site sanitary sewage systems which use ground absorptions;

(D) 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.

(iv) Timber removal and skidding of trees in the riparian area 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. Any tree removal must be performed in a manner that does not compromise the intended purpose of the riparian area and is in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J .0201-.0209).

(b) The following waterbodies and land uses are exempt from the riparian area requirement:

(i) 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;

(ii) Ditches and manmade conveyances other than modified natural streams which are used exclusively for drainage of silvicultural land or naturally forested areas. All forest harvesting operations shall be in compliance with North Carolina’s Forest Practices Guidelines Related to Water Quality;

(iii) 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, intermittent waterbody, or lakes, ponds or estuaries exists on the ground;

(iv) 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;

(v) 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 habitat and to protect water quality;

(vi) The following uses may be allowed where no practical alternative exists. A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration or density of the proposed activity and all alternative designs, the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to surface waters. Also, these structures shall be located, designed, constructed, and maintained to have minimal disturbance, to provide maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to the maximum extent practical through the use of best
management practices:

(A) Road crossings, railroad crossings, bridges, airport facilities, and utility crossings may be allowed if conditions specified in Sub-Item (8)(b)(vi) of this Rule are met;

(B) Stormwater management facilities and ponds, and utility construction and maintenance corridors for utilities such as water, sewer or gas, may be allowed in Zone 2 of the riparian area as long as the conditions specified in Sub-Item (8)(b)(vi) of this Rule are met and they are located at least 30 feet from the top of bank or mean high water line. Additional requirements for utility construction and maintenance corridors are listed in Sub-Item (8)(b)(vi) of this Rule.

(vii) A corridor for the construction and maintenance of utility lines, such as water, sewer or gas, (including access roads and stockpiling of materials) may run parallel to the stream and may be located within Zone 2 of the riparian area, as long as no practical alternative exists and they are located at least 30 feet from the top of bank or mean high water line and best management practices are installed to minimize runoff and maximize water quality protection to the maximum extent practicable. Permanent, maintained access corridors shall be restricted to the minimum width practicable and shall not exceed 10 feet in width except at manhole locations. A 10 feet by 10 feet perpendicular vehicle turnaround is allowed provided they are spaced at least 500 feet apart along the riparian area;

(viii) Stream restoration projects, scientific studies, stream gauging, water wells, passive recreation facilities such as boardwalks, trails, pathways, historic preservation and archaeological activities are allowed; provided that they are located in Zone 2 and are at least 30 feet from the top of bank or mean high water line and are 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 best management practices. Activities that must cross the stream or be located within Zone 1 are allowed as long as all other requirements of this Item are met;

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

(x) In addition to exceptions included in Sub-Item (8)(b)(i)-(ix), canals, ditches, and other drainage conveyances are exempt from the riparian area requirement if both water control structures with a water control structure management plan and a nutrient management plan, are implemented on the adjacent agricultural land according to the standards and specifications of the USDA - Natural Resources Conservation Service or the standards and specifications adopted by the NC Soil and Water Conservation Commission. The water control structures and nutrient management practices must provide equivalent protection and directly affect the land and waterbodies draining into the waterbody exempted from the riparian area requirement. To the maximum extent practical, water control structures shall be managed to maximize nitrogen removal throughout the year. A technical specialist designated pursuant to rules adopted by the Soil and Water Conservation Commission must provide written approval that the nutrient
management and water management plans meet the standards and specifications of the USDA - Natural Resources
Conservation Service or the standards and specifications adopted by the NC Soil and Water Conservation Commission.
If the nutrient management plans and water management plans are not implemented, then a riparian area pursuant to this
Section is required.

(c) The following are modifications to the riparian area requirements.

(i) On agricultural land where either water control structures with
a water control structure management plan, or a nutrient
management plan is implemented according to the standards
and specifications of the USDA - Natural Resources
Conservation Service or the standards and specifications
adopted by the NC Soil and Water Conservation Commission,
then a 20-ft forested or a 30-ft vegetated buffer is required.
The water control structures or nutrient management practices
must provide equivalent protection and directly affect the land
and waterbodies draining into the waterbody with a modified
buffer requirement. To the maximum extent practical, water
control structures shall be managed to maximize nitrogen
removal throughout the year. A technical specialist designated
pursuant to rules adopted by the Soil and Water Conservation
Commission must provide written approval that the nutrient
management plan meets the standards and specifications of the
USDA - Natural Resources Conservation Service or the
standards and specifications adopted by the NC Soil and Water
Conservation Commission.

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

(iii) 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.

(d) Maintenance of Zones 1 and 2 is required in accordance with this Rule.

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

(ii) Concentrated runoff from new ditches or manmade
conveyances must be dispersed into sheetflow before the
runoff enters Zone 2 of the riparian area. Existing ditches and
manmade conveyances, as specified in Sub-Item (8)(b)(ii) of
this Rule, are exempt from this requirement; however, care
shall be taken to minimize pollutant loading through these
existing ditches and manmade conveyances from fertilizer
application or erosion.

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

(e) Periodic maintenance of modified natural streams such as canals is allowed
provided that disturbance is minimized and the structure and function of the
riparian area is not compromised. A grassed 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 that needed for
equipment access and operation. The travelway shall be located to maximize
stream shading.

(f) Where the standards and management requirements for riparian areas are in
conflict with other laws, regulations, and permits regarding streams, steep slopes,
erodible soils, wetlands, floodplains, forest harvesting, surface mining, land
disturbance activities, development in Coastal Area Management Act Areas of
Environmental Concern, or other environmental protection areas, the more
protective shall apply.
The Environmental Management Commission acknowledges that best management practices under the standard management practice option of this Rule do not fully address nitrogen loading, including atmospheric emissions and deposition, from animal operations. As information becomes available on nitrogen loadings from animal operations and best management practices to control these loadings, other best management practices from animal operations may be required by the Commission as necessary to achieve equivalent reduction in nitrogen loadings therefrom. These additional best management practices shall be required if deemed necessary to achieve a net total nitrogen loading reduction from the animal operations based on average 1991-1995 conditions.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.3(a)(1);