MEMORANDUM

TO: Senator Dan Clodfelter
Senator Charlie Albertson
Representative Pryor Gibson
Representative Lucy Allen

CC: Secretary Bill Ross
Assistant Secretary Manly Wilder
Assistant Secretary Robin Smith
Susan Morgan
Kristin Walker
Kristine Leggett
Andrew Pennock
Elizabeth Biser

FROM: William Gilmore, Director, Ecosystem Enhancement Program

DATE: Sept. 11, 2008

RE: Nutrient Offset Program Transition Interim Report

S.L. 2007-438 requires the N.C. Department of Environment and Natural Resources to report to the Environmental Review Commission on the matter of transitioning the Nutrient Offset Program under the Ecosystem Enhancement Program from a fee-based program to a program based on the actual costs of providing nutrient credits. The progress report is attached. A final report will be provided to the ERC in March 2009. If you have any questions, please contact me directly at (919) 715-1412.

Attachment

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September 1, 2008

A Report of the Ecosystem Enhancement Program's Response to Session Law 2007- 438 Requiring the Transition of the Nutrient Offset Program to an Actual Cost Method

Progress Report

Prepared for
Environmental Review Commission

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I. Executive Summary

Session Law 2007-438 mandates that the N.C. Department of Environment and Natural Resources (DENR) is required to develop and implement a plan to transition the N.C. Ecosystem Enhancement Program Nutrient Offset Program from a fee-based program to a program based on the actual costs of providing nutrient credits. This transition is to occur no later than Sept. 1, 2009 and requires the employment of the least-cost alternative for providing nutrient-offset credits, consistent with rules adopted by the Environmental Management Commission for implementation of nutrient-management strategies in the Neuse and the Tar-Pamlico river basins. The legislation also requires DENR to "report on its progress in developing and implementing a new fee structure for the Nutrient Offset Program to the Environmental Review Commission on 1 September 2008." This report serves that purpose.

DENR agrees that it is important that fees for nutrient reductions reflect the actual costs of achieving those reductions. The Ecosystem Enhancement Program has been compiling data from market-driven contract awards that accurately reflect restoration project costs. The program has also identified objectives for an actual-cost approach and has identified issues that need to be considered in its development. Key considerations include the practicability of the method, and accounting for all aspects of restoration project costs. Based on these considerations, the following basic rate establishment method has been devised:

$$ActualCostRate = \frac{ActualCosts}{TotalPoundsOffset} + AdjustmentFactor$$

This method incorporates known and predicted costs of providing nutrient reductions (including data from negotiated consultant fees and competitive bid awards to private-sector companies) in relation to reductions achieved and accounts for situations when revenues exceed or are below expenditures. The method has additional complexities that are described in the report. With concurrence from the Environmental Review Commission (ERC), EEP will continue to refine the proposed approach and begin to engage stakeholders in discussing its viability. EEP proposes to meet with key stakeholders in advance of the program's March 2009 report to the ERC.

II. Introduction

The North Carolina Ecosystem Enhancement Program (EEP), an initiative in DENR, implements restoration projects that reduce nutrients entering the Neuse and Tar-Pamlico river basins. This program, known as the Nutrient Offset Program, is made available to developers in these river basins to help them comply with nutrient-sensitive-waters management strategies set by the Division of Water Quality (DWQ).

Since its establishment in 2001, the Nutrient Offset Program has received payments of $17,132,430 for 1,335,467 pounds of nitrogen reduction and 1,768 pounds of phosphorus reduction. EEP has used these funds to restore 226 acres of riparian buffer and to implement five stormwater wetland best management practices (BMPs). These projects represent 564,630 pounds of nitrogen and 840 pounds of phosphorus reduction in the Neuse and Tar-Pamlico river basins combined. The gap between required reductions and provided reductions is the result of EEP suspending the acquisition of restoration projects while the legislature resolved fee issues as described below. EEP is currently actively procuring projects to achieve required reductions. Additional program statistics are included in the Appendix.

Recognizing that the original fees established for nutrient payments to the program were not sufficient to cover the costs of implementing restoration projects to achieve required reductions, DWQ conducted a rule-making process to revise the fees in 2005. Revised fees became effective in March 2006. Soon thereafter, the legislature rescinded the new fees, leaving the Nutrient Offset Program to operate under the original, insufficient fees. At the same time, the General Assembly also commissioned a study to determine what the fees for the program should be. During this period, EEP suspended procurement of restoration projects until the legislature took action to set fees at an appropriate level. As payment to EEP was the primary option available to developers for compliance with DWQ nutrient rules, the program accepted payments at below-cost levels during this period.

Using the results of the legislative study conducted by Research Triangle Institute, the legislature ratified Session Law 2007-438, which established interim nutrient reduction fees for nitrogen and phosphorus in the Neuse and Tar-Pamlico river basins. This bill was passed in August 2007. Once interim fees were set, EEP developed a strategy to procure restoration projects to provide required reductions, and began project development and initiated appropriate contracting procedures.

As required by Session Law 2007-438, DENR has developed a proposed plan to transition the EEP Nutrient Offset Program from a fee-based program to a program based on the actual costs of providing nutrient credits. This report provides an update on progress to date, presents a proposed approach to establishing actual-cost rates, describes important considerations in developing such an approach, and describes proposed next steps in this transition. An appendix provides additional detail on the Nutrient Offset Program in general.

III. Transitioning to an Actual Cost Method

A. Objectives

The development and implementation of an Actual Cost Method relies on meeting a number of program objectives in order to meet regulatory rules, statutes, and departmental goals. During the development of the method described in the next section, a number of objectives and issues were reviewed and considered. These variables are continuing to be analyzed during the development process and are discussed below.

The following objectives were identified in the development of the Actual Cost Method:

- ***The Actual Cost Method must incorporate real costs of generating nutrient reduction credits.***
  While this objective is somewhat obvious, it is the cornerstone of an effective approach and is worth noting.

- ***All costs associated with implementing the program and meeting regulatory requirements must be accounted for in the method.***
  Failure to account for all costs will result in collecting insufficient funds to meet regulatory requirements. Full-cost accounting techniques must therefore be utilized to ensure that the Actual Cost Method collects sufficient payments.

- ***The Actual Cost Method must be a self-sustaining financial model.***
  The EEP Nutrient Offset Program is a receipt-based program. Currently, the Nutrient Offset Program does not receive any state or federal appropriations. All program costs are paid through applicant payments collected from the Nutrient Offset Program. Thus, the Actual Cost Method must account for all program expenditures and cash-flow demands, and income received from applicants.

- ***Rates must change (upwards or downwards) as actual costs change.***
  As actual costs increase or decrease, the Actual Cost Method must result in a self- adjusting rate to ensure that only actual costs are charged to applicants. Since actual costs are dynamic, consideration was given to the frequency of the rate adjustment. The Actual Cost Method must be designed to allow regularly scheduled adjustments. Four potential scenarios were considered for making adjustments:

    1. Next Payment – Calculate actual cost rate for each applicant when reduction credits are requested. This approach would require extensive administrative effort to calculate and would not provide any predictability for applicants on what the actual cost rate is likely to be at the time reduction credits are needed. This approach could also result in delays to payment process due the need to calculate the actual cost rate each time.

    2. Quarterly – Calculate actual cost rate every three months. Requires a moderate amount of administrative effort to calculate and provides some predictability for applicants. The interval is sufficiently small that if actual costs were to change during this interval, the subsequent adjustment during the next quarter would be expected to be minor.

    3. Annually – Calculate actual cost rate every 12 months. Low administrative effort to calculate and a high degree of predictability. Small to moderate adjustments might be expected on annual basis.

4. More than One Year -- Calculate actual cost rate at intervals greater than 12 months. High degree of predictability for applicants but also could result in significant numbers of payments that were above or below actual costs and thus require significant adjustments each time actual cost rate is calculated.

- ***The Actual Cost Method must be applicable at either Cataloging Unit (CU), Basin, or State levels.***
  Nutrient-reduction rules are currently in effect in the Tar-Pamlico and Neuse river basins and have been proposed in the Upper Cape Fear basin. Nutrient requirements must be met within the eight-digit Cataloging Unit (as defined by the U.S. Geological Survey; see pg. 15 of the appendix for a map of the eight-digit Cataloging Units for the Tar-Pamlico and Neuse river basins). The proposed Cape Fear rules require mitigation for nutrients in smaller watersheds. The costs of achieving nutrient reductions will vary from watershed to watershed. Therefore, the Actual Cost Method must be applicable to watershed's size and must result in the collection of dollars equal to the actual cost of producing projects in those watersheds. Since a single flat statewide fee could result in below cost fees in high-cost watersheds, EEP supports the application of the Actual Cost Method on either the watershed or river basin level, but not at the State level.

- ***The Actual Cost Method must be applicable to either nitrogen or phosphorus offsets.***
  The Neuse and Tar-Pamlico rules and the proposed Upper Cape Fear rules require mitigation offsets to both nitrogen and phosphorus. The costs associated with removing nitrogen and phosphorus differ significantly. The Actual Cost Method must account for the differing costs associated with removing these nutrients.

- ***The Actual Cost Method must be understandable and easy to use.***
  EEP interacts annually with hundreds of citizens and customers, including municipalities, to assist them in meeting their regulatory requirements so that their development projects can proceed. The Nutrient Offset Program currently accepts payments for nitrogen and phosphorus in nine watersheds (with three additional watersheds proposed in the Upper Cape Fear basin). The Actual Cost Method could be used to develop rates for each watershed-nutrient combination (a multiple-rate approach) or could be used to develop a single rate. Both approaches would be based on actual costs. The Actual Cost Method must factor in the ease of communicating and administering the program without creating a difficult-to-understand program.

- ***The Actual Cost Method must be predictable and equitable.***
  Consideration was given to actual-cost process that would charge applicants based on the actual costs of the most recently initiated individual nutrient project. Since individual nutrient-reduction projects vary in cost per pound of reduction, such a process would result in unpredictable and highly variable mitigation costs for applicants. This process would also result in similar applicants being charged significantly different rates solely because of the timing or order of the request. This type of actual-cost approach would be difficult to understand and would present a perception of inequality. Thus, the Actual Cost Method must contain an element of predictability (actual cost rates stable for a specific period of time) and be equitable (applicants pay similar rates when requested at similar time periods).

- ***The Actual Cost Method must be in place by September 2009.***
  Session Law 2007-438 expires in September 2009. At that time, a new rate structure must be installed for the Nutrient Offset Program. DENR is proposing to establish the Actual Cost

Method through rulemaking, which may require an extension of the interim fees set in statute to allow time for the rulemaking process (approximately two years).

B. Actual Cost Method

The General Assembly has instructed DENR to move toward an actual-cost method when determining how much applicants must pay into the Nutrient Offset Program. The appropriate rate for charging applicants the actual costs of administering the program can be summarized in simple terms as follows:

$$ActualCostRate = \frac{ActualCosts}{TotalPoundsOffset} + AdjustmentFactor$$

In this equation, the actual costs represent the total costs associated with running and delivering the Nutrient Offset Program (this includes the cost of restoration projects and costs associated with program administration). The total pounds offset represents the total amount of pounds paid into the program that must be reduced by the program. The adjustment factor is the self adjusting portion of the equation that ensures that the actual receipts collected always equal the actual costs of implementing the program. The adjustment factor is essential to the actual cost rate as it ensures that if at any point in time the fees collected do not equal the actual costs (due to unforeseeable expenditures or savings), the future fee adjusts to bring the program back into balance. The objective is to have the exact cost of implementing the program match the payments collected by the program. When the actual costs equal the actual receipts, no adjustment will be necessary (adjustment factor equals $0/lb). The adjustment factor can be calculated as follows:

$$AdjustmentFactor = (ActualCosts - ActualReceipts)/(Time * TotalPoundsPaidPerYear)$$

If actual costs differ from receipts, the adjustment can either be made instantly (e.g., the next payment is higher or lower number of payments). DENR proposes that when savings are achieved, the full adjustment can be implemented immediately. In cases where payments are less than actual costs, as has been the case recently, the adjustment should be made over a larger number of payments so that the overall effect on any one user of the program is minimized.

This equation fairly represents the appropriate rate to charge applicants, as it represents the actual cost-per-pound for implementing the program. Charging less would result in insufficient funds to meet required nutrient reductions. Charging more would result in excess dollars received from applicants.

The components of the Actual Cost Method to derive an actual cost rate can be further defined as follows:

$$ActualCosts = ProjectCosts + AdministrationCosts$$

Project Costs are the actual costs associated with implementing nutrient-offset mitigation projects to meet the regulatory nutrient reductions paid into the Nutrient Offset Program. All project costs, from land acquisition through design, construction, success monitoring, maintenance and long-term stewardship, must be included to determine actual costs. Many of these costs are captured through data from private-sector companies that are employed by EEP to design and construct restoration projects.

In order to utilize full-cost accounting, each project within the Nutrient Offset Program must be evaluated. Projects can be categorized into three classes, all of which must be considered when determining the project costs:

1. **Complete Projects** – Nutrient-reduction projects that have been completed where no future expenditures are anticipated. For these projects, the complete actual cost of the project is known.

2. **Projects in Process** – Planned or initiated projects intended to meet mitigation requirements include two types of projects:

   a. Incomplete Projects – Nutrient-reduction projects that are still in progress. The projects have been initiated and some costs have been incurred, but expenditures are not complete. Paid expenditures are known, but the future expenditures necessary to complete the project must be estimated. The cost to complete a current contract can be easily calculated. Future contracts necessary to complete the project must be calculated based on the actual costs of implementing similar types of contracts. The cost for future contracts must also be adjusted for inflation.

   b. Projects Needed to Meet Remaining Requirements – Includes nutrient-reduction projects that are required to be completed because of received payments, but project expenditures have not yet started. Since no contracts have been initiated, the entire project cost must be calculated using the actual costs of implementing similar types of projects after accounting for inflation.

3. **Terminated Projects** – Projects not completed because of unforeseeable issues such as the discovery of hazardous wastes on site, liens discovered on the property, cultural resources identified during a project's excavation, etc. Although these projects yield reduced or no nutrient-reduction credits, they still represent actual program expenditures and must be included in the Actual Cost Method. These types of costs represent a small portion of the total program expenditures. Failure to include these costs will result in calculating rates that are insufficient to cover program costs.

Considering the project categories above, Actual Project Costs can be estimated using the following formula:

$$ProjectCosts = Cost_{CompletedProjects} + Cost_{ProjectsInProcess} + Cost_{TerminatedProjects}$$

The cost of completed projects and terminated projects are known precisely. The following method describes how costs are derived for projects in process.

Actual costs for projects in process are the expenditures made, plus the cost to complete. Cost to complete is the remaining costs associated with completing the mitigation projects:

$$Cost_{ProjectsInProcess} = PastExpenditures + CostToCompleteProjects$$

Past expenditures are known costs of projects in process, whereas the cost to complete must be calculated. The calculation is shown below:

$$CostToCompleteProjects = Cost_{CostToCompleteExistingContracts} + Cost_{FutureContracts}$$

The current cost-to-complete for the existing contracts is calculated based on the known total contract cost and past expenditures:

$$CosttoComplete_{ExistingContract} = Cost_{ExisitingContract} - Expenditures_{ExistingContract}$$

The costs to complete future contracts represents the additional cost of completing the projects. Some projects may have no additional contracts necessary to complete the project, whereas others may have multiple contracts. The cost to complete remaining contracts must be based on cost of implementing that contract at the time the contract is needed. For example, if a project will go to construction in two years, the cost of construction must account for construction costs in the future and be adjusted for inflation. Historical construction costs from five years ago will not accurately reflect the cost of constructing a project two years into the future. Therefore the Actual Cost Method must use historical actual costs, but must also adjust those costs based on inflation. Changes in regulations could also change the expected contract costs (for example, if additional or less land or engineering became required). If this occurs, future contract costs would need to be adjusted based on the change in regulations as well. Nevertheless, as soon as new contract data became available for these new projects, the actual costs of these contracts should be incorporated to calculate the cost of future contracts. In this way, the Actual Cost Method self-adjusts based on actual cost data.

$$Cost_{FutureContracts} = f_{(ContractType)}Cost_{PastContracts} * InflationAdjustment$$

Administration Costs – The actual costs associated with providing staff, equipment, space, etc. for administering the Nutrient Offset Program. Administrative costs are generally 6-10 percent for EEP's mitigation programs.

EEP proposes to utilize the Actual Cost Method described above for its future rate structure. The method itself would be established in rule with clearly described processes for its execution.

C. Issues to Consider

There are a number of issues that must be considered when developing an Actual Cost Method:

- ***Accounting for payments made at 'below cost' rates –*** When the legislature rescinded revised nutrient fees and reset fees at a level that was below the actual cost of providing nutrient reductions, EEP continued to receive payments from individuals and companies in need of reduction credits for compliance with nutrient rules. In fact, the volume of payments during this period was very high. Strategies that could address the historical issue of below-cost payments include legislative appropriations to close the funding gap, and accounting for the funding gap in future fees. The proposed Actual Cost Method can accommodate both approaches utilizing the adjustment factor as described above. However, regardless of whether additional gap funding is provided to the Nutrient Offset Program to address the historical under-collection of fees, the adjustment factor is an essential component of the actual cost rate for future fees. How this is best addressed is an issue that can be discussed with stakeholders at a proposed meeting to be held before the end of this year (see next section).

- ***Nutrient -reduction requirements*** – Under current state rules, the mitigation required for nutrient loading accounts for 30 years of annual nutrient exports from the development. Payment is made in advance and is intended to equal the cost of producing nutrient offsets equal to the total number of required pounds. Thus, the nutrient-reduction requirements are measured in total pounds rather than pounds per year. DWQ's expectation is that reductions

provided in the Nutrient Offset Program perform in perpetuity and consideration may be given to accounting for perpetual reductions.

- ***Nutrient-reduction credits*** – The nutrient-reduction credits associated with a nutrient mitigation project are measured by the total number of pounds reduced over the lifetime of the project. Therefore, if a project reduced 10 pounds of nitrogen over 30 years, the project generates 300 nitrogen credits.

- ***Life cycle of a typical nutrient-reduction project*** – The life cycle of a typical nutrient reduction project is 32-33 years. Two major types of projects are currently used to offset nutrients in North Carolina: stream riparian-buffer restoration projects and stormwater best-management practices. Typically, these projects take one year to identify and acquire the property, one year to design and plant (buffer) or two years to design and construct (stormwater BMP), five years of monitoring and then 25 years in long-term management, for a total of 30 years of performing nutrient reduction. As such these projects can incur expenses for 32-33 years; actual completed costs of these projects are therefore not fully known until the end of the project's life cycle. Nevertheless, the actual costs of the project include both paid costs and costs associated with future maintenance. Both costs must be included in the Actual Cost Method in order to ensure that revenues match expenditures.

- ***Incomplete project costs*** – Since the life cycle of the typical nutrient-reduction project is 32-33 years, most projects will be incomplete at any point in time. However, the full actual costs of every project must be accounted for in the Actual Cost Method, since the failure to include all costs will result in below-cost rates. Thus, the actual cost of a project includes both past expenditures, and costs to complete. The cost to complete is literally the future cost to complete the project. Determining the cost to complete a project must not only take into consideration the remaining cost of the project, but must also consider inflation over the 30-plus years of the project life and potential liability costs (e.g., regulatory change, weather-related or design failure, all leading to an extended project life or actual project replacement). The Actual Cost Method must be self-adjusting (upwards or downwards) as both paid costs and costs to complete change over time.

D. Actions Taken to Support Development of the Actual Cost Method

The Actual Cost Method requires that the Nutrient Offset Program maintain detailed and accurate records of the program's costs and revenues for financial accounting, and also keep accurate records of the total mitigation requirements and total nutrient reductions achieved from projects developed to accurately calculate the appropriate actual-cost rates. Consequently, EEP began the development of an improved financial accounting system that is designed to track comprehensive costs on all projects, receipts collected from all applicants, and total mitigation requirements that must be fulfilled. The previous system was inadequate to perform each of these tasks in a way that would facilitate actual-cost calculations on demand.

During the 2007-2008 fiscal year, EEP has been transitioning to a new, more secure and robust project-tracking database. The current database, built on DENR's IBEAM platform, was designed to manage project credit, stages, and property acquisition. Financial and contract information will be added to the IBEAM database over the next couple of years.

EEP currently manages its financial and contracting information in other DENR database programs. These programs were designed prior to the inception of EEP and do not possess the capability to relate financial and contract information to project-specific information. EEP identified this lack of connectivity as an issue to be addressed in order to allow accurate

calculations of cost per credit. Simultaneous with the project data migration into IBEAM, EEP undertook a needs analysis and designed an improved financial accounting system that will allow relation of financial data to project information. The new system will become the prototype for the next iteration of the IBEAM system, which will ultimately combine financial and project information in one database. Migration of data from the old databases into the new database is progressing. The re-designed financial accounting system will be able to connect to dynamic data in the IBEAM project database, which will allow EEP to query, calculate and track true mitigation costs, a significant improvement over the capabilities of the previous systems.

IV. Next Steps

A number of efforts will begin or continue over the next several months:

- Engage Stakeholders

With concurrence from the ERC, EEP intends to collaborate with DWQ to convene a group of key stakeholders to discuss the basic approach to setting actual-cost rates described in this report. The stakeholder meeting(s) would include discussion of important unresolved issues related to the actual-cost model, such as whether rates should vary by cataloging unit and the frequency with which rates should be revised. Interest groups invited to participate would largely mirror those that were part of a group convened by legislative staff to refine the scope of the RTI nutrient-offset study.

EEP proposes to convene these stakeholders in November or December of 2008 in advance of the next progress report to the ERC in March 2009. Additional meetings would be held if necessary. With feedback from stakeholders and the ERC, DENR will proceed with the establishment of the Actual Cost Method for setting rates for nutrient-reduction credits.

- Completion of Database

As described earlier in this report, EEP has made significant advances in establishing a database to support the proposed actual cost method. This effort will continue.

- Report to ERC in March 2009

As required by statute, EEP will provide an additional progress report on the transition to the Actual Cost Method in March of 2009.

- Pursue Establishment of Agreed-Upon Method in Rule

With feedback from the ERC and stakeholders, EEP and DWQ will initiate procedures to establish the method in rule. In practice, rulemaking takes approximately two years to complete. DENR anticipates being able to initiate rulemaking in the spring of 2009.

Appendix

Background Information and Statistics on the Nutrient Offset Program

I. Nutrient Offset Program Timeline

EEP Nutrient Offset Program History of Supporting Legislation and Fee Schedules

1996
Session Law 1995-572 ratified on June 19, 1996, setting goals for nitrogen reduction in the Neuse River basin.

1997
Nutrient Sensitive Waters Management Strategy, adopted by EMC (Feb. 11, 1997), for Neuse basin.

1998
Neuse Nitrogen Fee established at $11 pound/year.

2001
First Neuse nitrogen payment received, May 2001.

2006
EMC expands nutrient offset to Tar-Pamlico River basin, establishing new fees (Jan. 12, 2006).

Nitrogen fees increased to $57 pound/year in Neuse and Tar-Pamlico basins; (March 1, 2006).

Phosphorus fee initiated in Tar-Pamlico basin at $45/0.10 pound/year (March 1, 2006).

First Tar-Pamlico River basin payment received, April 2006.

Session Law 2006-216, ratified on Aug. 8, 2006, reduces fees to $11 pound/year for nitrogen in Neuse and Tar-Pamlico, and $11/0.10 pound/year for phosphorus in the Tar-Pamlico; requires refunds for any fees paid in excess; and commissions a study by the Environmental Review Commission (ERC) of costs associated with providing nutrient offset reduction projects.

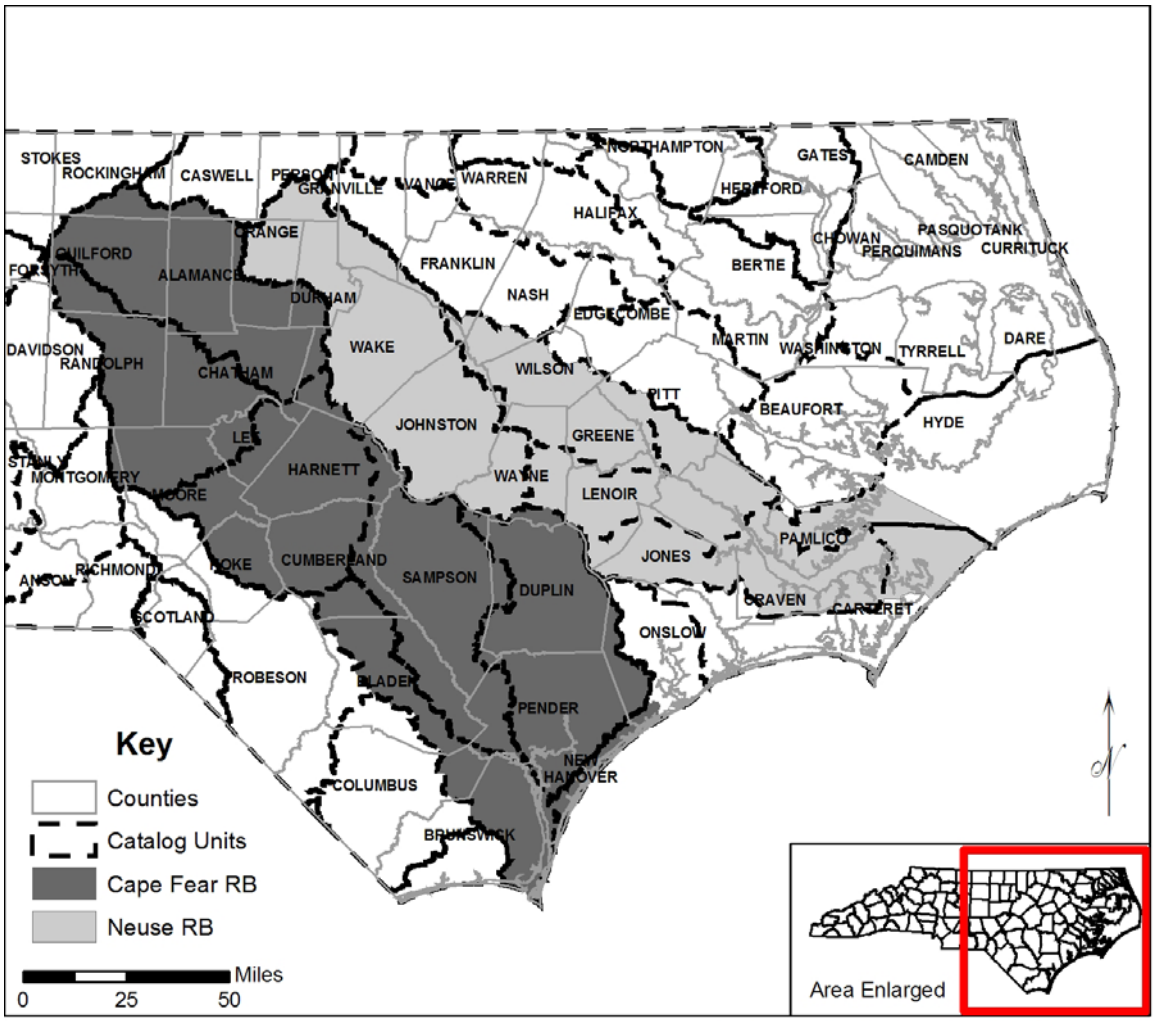
2007
ERC hires RTI International to perform the study of costs associated with providing nutrient offset reductions.

RTI International submits its findings in a report to the ERC in June 2007; recommends fee structure.

Session Law 2007-438 ratified on Aug. 23, 2007, specifying fees for nitrogen in the Neuse ($28.35 / pound/year), nitrogen in the Tar-Pamlico ($21.67 / pound/year), and phosphorus in the Tar-Pamlico ($28.62 / 0.10 pound/year), effective Sept. 1, 2007; and requires DENR to develop no later than Sept. 1, 2009, a plan to transition EEP nutrient offset program from a fee-based program to a program based on actual costs of providing nutrient credits, with progress reports due Sept. 1, 2008, and March 1, 2009. This act also required that all nutrient offset projects be located within the same eight-digit Cataloging Unit in which the associated nutrient loading takes place.

II. North Carolina River Basin Map

Below is the Nutrient Offset Program Area Map depicting the Neuse and Tar-Pamlico river basins and corresponding eight-digit cataloging unit codes. Local governments participating in the program are located within these river basins.



Map Document: (P:\WatershedMap\NeuseCapeFear.mxd)
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III. Nutrient Offset Program Participants

EEP has provided nutrient-reduction credits to both the private and public sectors. The private- sector customers include homeowners**,** private residential developers, and private retail and commercial developers. The public-sector customers include government agencies (towns, cities, county, state, federal), school systems and military bases. The table below shows that the majority of the users of EEPs Nutrient Offset Program are those in the private sector.

PRIVATE and PUBLIC SECTOR OFFSET REQUIREMENTS
(in pounds from 2001 through the Present)

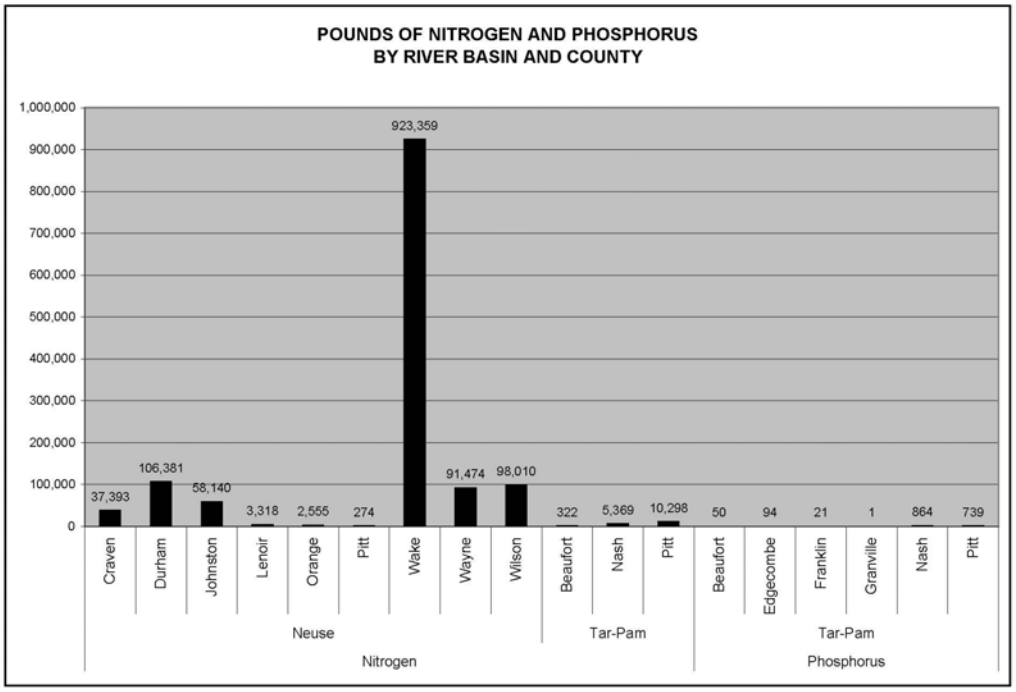
Basin (Nutrient)	Reduction Requirements for Public Sector Participants	Reduction Requirements for Private Sector Participants	Total Requirements
Neuse (N)	31,761	1,287,718	1,319,479
Tar-Pam (N)	2,154	13,834	15,988
Tar-Pam (P)	61	1,707	1,768
Total Requirements	33,976	1,303,259	1,337,235
Percent of Total	3%	97%	100%

A total of sixteen municipalities and ten counties are part of the Nutrient Offset Programs in the Neuse and Tar-Pamlico river basins. These local governments are listed below.

Neuse 15A NCAC 2B .0235	Tar-Pamlico 15A NCAC 2B .0258
TOWNS & CITIES (10) Cary, Durham, Garner, Goldsboro, Havelock, Kinston, New Bern, Raleigh, Smithfield, Wilson **COUNTIES (5)** Durham, Orange, Johnston, Wake, Wayne	**TOWNS & CITIES (6)** Greenville, Henderson, Oxford, Rocky Mount, Tarboro, Washington **COUNTIES (5)** Nash, Beaufort, Edgecombe, Franklin, Pitt

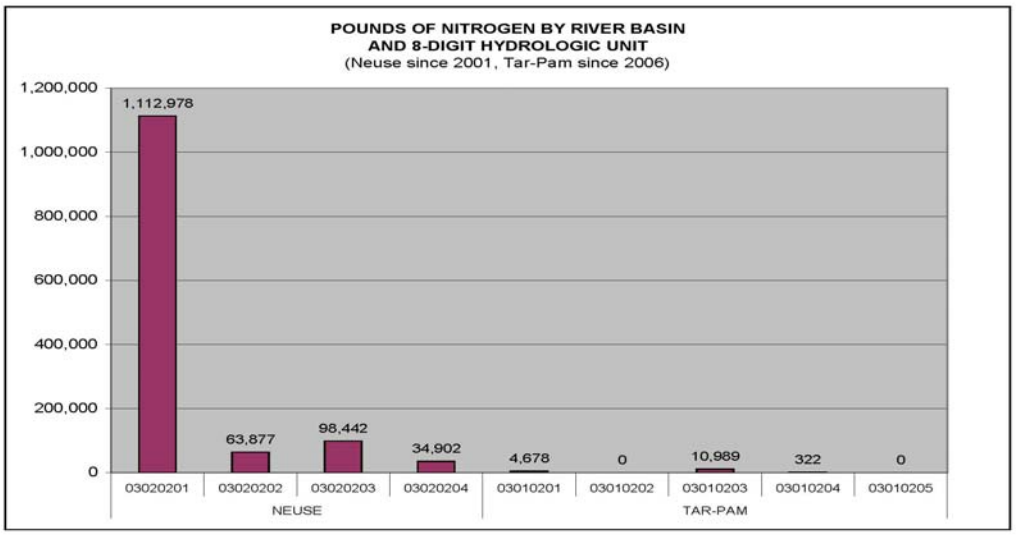
IV. Pounds of Nutrients by River Basin and County

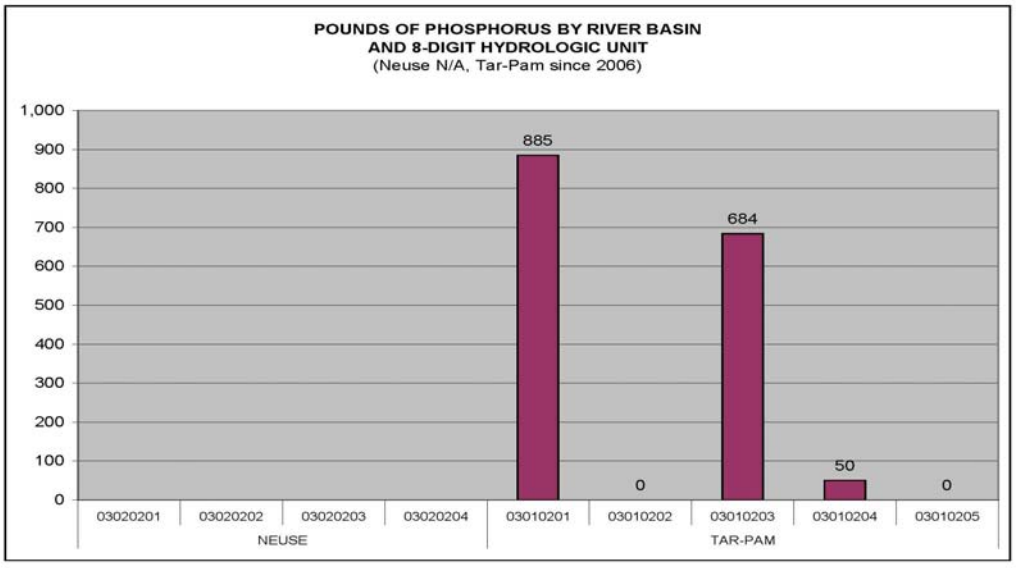
The figure below illustrates the requirement amounts in pounds of nitrogen and phosphorus that the EEP is responsible for providing through the Nutrient Offset Program. The figure also shows the distribution of these requirements among participating counties. Wake County is by far the most active area for nutrient-offset payments.



V. Pounds of Nutrients Required by Basin

The following figures show the pounds of nitrogen and phosphorus reduction required by river basin and eight-digit cataloging unit.





VI. Nutrient Reduction Provided

EEP has provided over 500,000 pounds of nutrient reductions in the Tar-Pamlico and Neuse river basins through the restoration of riparian buffers or the implementation of stormwater wetlands. The table below summarizes the reductions achieved by river basin and cataloging unit (CU).

Basin	Nutrient	CU	Number of Sites	Nutrient Offset Credits	Counties
NEUSE	Nitrogen	03020201	8	407,058	Wake, Johnston
	Nitrogen	03020202	1	5,070	Wayne
	Nitrogen	03020203	2	145,842	Greene
	Nitrogen	03020204	1	5,820	Craven
TAR-PAM	Nitrogen	03020101	1	840	Franklin
	Phosphorus	03020101	1	840	Franklin
TOTAL			14	565,470	

Reductions provided are currently lower than those required. This gap is the result of EEP suspending the acquisition of restoration projects during 2006 and 2007 while the legislature resolved fee issues as described in the main portion of this document. EEP is actively procuring projects to achieve required reductions