Regulatory Impact Analysis

Proposed Amendments to the Tar-Pamlico Wastewater Rule
15A NCAC 02B .0733

August 12, 2024

Rule Topic: **Amendment of Tar-Pamlico Nutrient Strategy Wastewater Discharger Rule**

Rule Citation: 15A NCAC 02B .0733

Agency: Environmental Management Commission

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Impact Summary:

- Federal Government:
  - *Costs*: No Fiscal Impacts
  - *Benefits*: Improves clarity and enforceability creating direct link between rule & group NPDES Permit

- State Government:
  - *Costs*: No Fiscal Impact
  - *Benefits:* Improves clarity & enforceability helping to avoid potential challenges to requirements

- Local Government:
  - *Costs:* No Fiscal Impact
  - *Benefits:* Adds flexibility by providing additional options for meeting rule requirements

- Regulated Community:
  - *Costs:* No Fiscal Impact
  - *Benefits:* Adds flexibility by providing additional options for meeting rule requirements

- Substantial Impact:
  - No Substantial Fiscal Impact

Authority:
G.S 143-214.1; G.S. 143-215.1; G.S. 143-215.3(a)(1); G.S. 43-215.8B; G.S.143B-282

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Introduction

The Tar-Pamlico Nutrient Strategy was adopted by the Environmental Management Commission (EMC) in 2001 and consists of a comprehensive set of rules designed to remedy nutrient over-enrichment of the estuary by equitably regulating nutrient pollution from both point and nonpoint sources. The rules seek to reduce nitrogen loading to the estuary by 30 percent and cap phosphorus loading relative to a 1991 baseline. Under an Agreement initiated in 1990 between the Division of Water Resources, EMC, and a group compliance association of point source dischargers, the Tar-Pamlico Basin Association (TPBA), received collective annual end-of-pipe nitrogen and phosphorus loading caps based on the nutrient strategy reduction goals. Under this Agreement the individual members of the TPBA work together to collectively stay below their combined nitrogen and phosphorus discharge allocations. If either cap is exceeded, the TPBA can fund nutrient reducing practices to offset those exceedances.

At its inception, the Agreement provided point sources a cost-effective alternative to uniform technology-based nutrient concentration limits. It later added elements of a nutrient Total Maximum Daily Load (TMDL) for the basin, including estuary loading goals and point and nonpoint source allocations. The Agreement was updated in "phases" covering an initial 5-year period followed by readoption at subsequent 10-year intervals and is currently in its fourth and final phase (Phase IV) which expires in May 2025.

A separate wastewater rule (15A NCAC 02B .0733) was also adopted in 1997 to address requirements for non-association new and expanding dischargers in the Tar-Pamlico basin. This rule was readopted with revisions in 2020, at which time its applicability was expanded to address all new and expanding facilities in the basin. This Rule in its current form does not address the implementation requirements for existing wastewater dischargers that are members of the TPBA, which are addressed in the Associations Group NPDES permit and Agreement.

The need to put the existing point source requirements contained in the TPBA Group NPDES permit and Agreement in rule is driven by increasing pressure on the Division to ensure that requirements imposed on the regulated community that meet the Administrative Procedure Act (APA) definition of a rule are in fact codified in rule. The APA provides guidelines and definitions for the adoption, amendment, or repeal of rules by state agencies in North Carolina. According to North Carolina General Statutes Chapter 150B-2(8) a "rule" is defined as follows:

> *"A 'rule' is defined as any agency regulation, standard, directive, or statement of general applicability that implements or interprets enactment of the General Assembly or Congress or a regulation adopted by a federal agency or that describes the procedure or practice requirements of an agency."*

To comply with the APA requirements the Division is proposing to revise the language in the .0733 rule to fully incorporate the wastewater discharge requirements for TPBA members as currently established in their NPDES Group Permit and Agreement. Codifying the point source requirements in rule not only accomplishes satisfying the requirements of the APA, but it also has the added benefit of establishing a more enforceable foundation for the TMDL driven requirements of the nutrient management strategy. Having these requirements in rule could help avoid future potential, albeit unlikely, legal challenges to the requirements in the Association's NPDES Group Permit which has incorporated key requirements of the Agreement over time.

Finally, the proposed revisions to the Rule provide an opportunity to modernize the language and improve the clarity of the requirements for the regulated community, while also providing the opportunity for stakeholder input on the rule language as it must undergo public notice and comment and review by the EMC before it can be adopted or modified in the future.

Baseline Regulatory Conditions

To understand what the costs and benefits of the proposed rule changes would be to affected parties, it is necessary to establish a regulatory baseline for comparison. For the purposes of this analysis, there are two primary regulatory conditions that establish the baseline nutrient reduction requirements for NPDES permitted wastewater dischargers in the Tar-Pamlico River Basin. The first is the Tar-Pamlico Wastewater Rule (.0733) rule which establishes requirements for all new and expanding dischargers in the basin. In its current form, the Rule applies to both Association and Non-Association new and expanding facilities but does not contain requirements for existing Association facilities. The second is the Tar-Pam Basin Association's NPDES Group Permit which translates the requirements for the Association into an enforceable format. Additionally, each member of the Association is also subject to the nutrient limits in their individual NPDES discharge permit should they leave the Association and be removed from the group permit at any time.

In addition, there is an EMC approved Agreement between the Division and the TPBA, initiated in 1990 and now in its fourth phase, referred to as the Phase IV Agreement, which establishes the TMDL driven nitrogen and phosphorus discharge caps for the Tar-Pamlico Basin Association. While the Phase IV Agreement is not considered part of the regulatory baseline for purposes of this analysis, it is included in this document as it forms the foundation for the Group Permit and provides important context.

More detail about the rule, the Group Permit, and the Phase IV Agreement are provided below, including in Table 1 which summarizes the key existing regulatory requirements contained in each.

Tar-Pam Wastewater Rule (15A NCAC 02B .0733)

The Tar-Pam Wastewater rule (15A NCAC 02B .0733) establishes the requirements for all new and expanding NPDES permitted dischargers in the basin. The rule requires new and expanding non-association domestic facilities to treat to a standard 3.0 mg/L TN and 0.5 mg/L TP, while industrial facilities must treat to best available technology limits. The rule also serves to provide market-based nutrient offset options requiring all increasing nutrient loads from new or expanding facilities to be offset by the acquisition of an equivalent amount of allocation and/or offset credit.

When first adopted in 1997 the requirements of this rule only applied to non-association dischargers. The Rule was readopted in 2020 and incorporated changes that expanded the rule's applicability to TPBA members providing a clear regulatory avenue for new and expanding TPBA facilities that is not provided in the Phase IV Agreement. The new and expanding discharger requirements for TPBA members are to go into effect when the Phase IV agreement expires in May 2025. Under the rule, TPBA members continue to enjoy the ability to expand within their allowable nutrient allocations. Where offset credits are purchased, they are subject to the nutrient offset rule (15A NCAC 02B .0703).

NPDES Group Permit & Individual Permits

Any facility that discharges or proposes to discharge to surface waters of the state must obtain an NPDES permit from the Division. These NPDES permits regulate the discharge of pollutants to surface waters from point sources, such as industrial and municipal wastewater treatment plants. The permit establishes specific limits on the types and amounts of pollutants a facility is allowed to discharge, monitoring and reporting requirements. They also serve as the legal basis for enforcing environmental regulations by providing the Division the authority to take enforcement actions such as issuing fines and penalties against permit holders that violate the conditions of their permit.

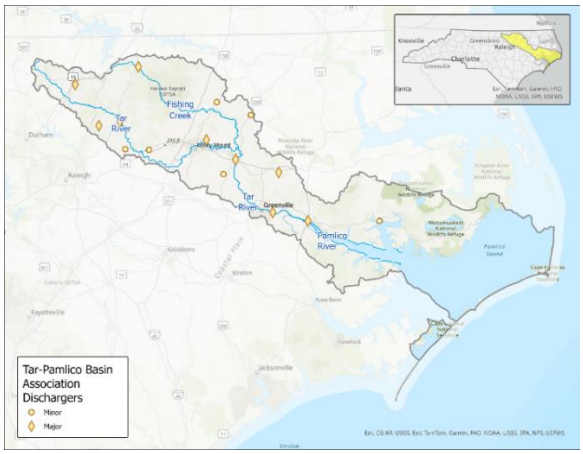
Based on guidance released by EPA's Office of Wastewater Management in 2007, EPA Region IV notified the Division during Phase III that Section 301(b)(1)(C) of the federal Clean Water Act and federal NPDES regulations (40 C.F.R. 122.44(d)(1)) require that NPDES permits in the Tar-Pamlico River Basin include any limitations established in or based upon an approved TMDL. To comply with EPA's directive, the Division added the group caps for nitrogen and phosphorus in the TPBA members' individual NDPES permits as part of the 2009 permit renewals. This was followed with adding the individual limits in the 2014 NPDES permit renewals. The Division also worked with the parties to develop an NPDES group permit that effectively allows the Association to continue operating under the existing 'group caps' approach established in the Agreement. The group permit includes both the group caps and the members' individual limits; but so long as the Association meets the group caps, the members will not be subject to their individual limits. The individual limits for one nutrient or the other only become effective if the Association exceeds the group cap for that nutrient. Similarly, if a discharger leaves the association they will be required to comply with the nutrient limits and conditions contained within their individual NPDES permit.

NPDES permit applications go through a rigorous vetting process. Permit applications are reviewed by Division permitting staff and are subject to public review and comment before they can be finalized and approved. Following Division review, each permit goes out to public notice followed by a 30-day public comment period. Major permits may also be subject to EPA review. If there is strong opposition to the issuance of the permit a public hearing may also be held to receive additional input. If no significant comments are received by the Division, the permit is finalized. Once approved NPDES permits are valid for 5 years and are renewed on a basinwide cycle.

Phase IV Agreement

The Phase IV Agreement is the fourth iteration of a nutrient control Agreement for point source discharges in the Tar-Pamlico River Basin. The first phase of the Agreement was initiated in 1990 in response to nutrient-driven water quality impairments in the Pamlico River estuary and its Nutrient Sensitive Water designation. The Agreement launched the overall Tar-Pamlico nutrient management strategy. Under the Agreement an association of point source dischargers, the Tar-Pamlico Basin Association, receives collective annual end-of-pipe nitrogen and phosphorus loading caps based on the overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading and no increase in loading of phosphorous from the baseline year 1991. In the event that either cap is exceeded, the Association must fund agricultural practices at a predetermined cost-effectiveness rate of $13.15 per pound of nitrogen to offset those exceedances through the NC Agriculture Cost Share Program. Applicability of the Agreement is limited to existing dischargers who are members of the Association. As of 2024 fifteen municipal wastewater treatment plants are members of the Association (Figure 1).

Figure 1. Tar-Pamlico Basin Association Members – 2024



TPBA Facility	NPDES Permit Number
Belhaven	NC0026492
Bunn	NC0042269
Enfield	NC0025402
Franklin County	NC0069311
Greenville Utilities Commission	NC0023931
Louisburg	NC0020231
Oxford	NC0025054
Pinetops	NC0020435
Robersonville	NC0026042
Rocky Mount	NC0030317
Scotland Neck	NC0023337
Spring Hope	NC0020061
Tarboro	NC0020605
Warrenton	NC0020834
Washington	NC0020648

Table 1. Summary of Existing Requirements for Tar-Pam NPDES Permitted Dischargers

Current Requirements	**Tar-Pam WW Rule** *(15A NCAC 02B .0733; As of April 1, 2020)*	**TPBA Group Permit** *(NPDES NCC000002)*	**Phase IV Agreement** *(2015-2025)*
Applicability	New & Expanding NPDES Permitted Dischargers	TPBA Members Only	TPBA Members Only
Nutrient Controls for Existing NPDES Permitted Dischargers	N/A	Establishes Individual and Combined end-of-pipe nitrogen and phosphorus discharge allocations the fifteen TPBA members.	Establishes Individual and Combined end-of-pipe nitrogen and phosphorus discharge allocations the fifteen TPBA members.
Offset Option for Nutrient Cap Exceedances	N/A	Dischargers may fund Ag BMPs through Ag Cost Share Program to offset Cap Exceedances in a given calendar year.	Dischargers may fund Ag BMPs through Ag Cost Share Program to offset Cap Exceedances in a given calendar year. Banked offset credit can be used to offset up to 10% of cap exceedance in a given year.
Association Membership Enrollment / Termination	N/A	Notify Division / Updates Made to Group Allocation; Terminated Dischargers must meet Individual Permit TN and TP limits.	Notify Division / Updates Made to Group Allocation; Terminated Dischargers must meet Individual Permit TN and TP limits.

Table 1. Summary of Existing Requirements for Tar-Pam NPDES Permitted Dischargers *(Continued)*

Current Requirements	**Tar-Pam WW Rule** *(15A NCAC 02B .0733; As of April 1, 2020)*	**TPBA Group Permit** *(NPDES NCC000002)*	**Phase IV Agreement** *(2015-2025)*
Monitoring & Reporting	N/A	Monitor as specified in Individual NPDES Permit; Submit annual report to Division by March 1st of each year. If Association exceeds 85% of TN or TP Cap in any calendar year it must develop loading projections, evaluate nutrient controls & identify improvements to ensure continued compliance.	Monitor effluent TN and TP; Submit annual report to Division by March 1st of each year.
Nutrient Controls for New & Expanding Facilities	All new & expanding facilities over 0.5 MGD receive based on equivalent concentrations of 3.5 mg/L TN & 0.5 mg/L TP for Domestic discharges. Industrial Limits = BAT. Acquire allocation from existing dischargers or offset credits pursuant to 02B .0703 sufficient for 10 years. TPBA members can expand within their current allocations.	N/A	Points to Requirements for New & Expanding Discharges in Rule .0733
Transfers of allocation via connection smaller facilities to larger facilities	N/A	Changes to TN & TP allocations are allowed when resulting from regionalization (accepting wastewater from another facility resulting in elimination of that discharge).	N/A

Summary of Proposed Revisions to .0733 Rule

The main goal of the proposed revisions to 15A NCAC 02B .0733 is to codify the existing requirements for the TPBA dischargers which are currently addressed in the TPBA Group Permit and Phase IV Agreement, while also modernizing and reorganizing the rule language for better clarity. None of the proposed revisions to the Rule change the nutrient allocations assigned to the individual TPBA members or the core elements of the long-standing group compliance framework the Association currently operates under. Similarly, the updates proposed for new and expanding dischargers allowing for the use of reserve allocation and existing offset credits only serve to provide additional options for meeting implementation requirements. As discussed later in this analysis, the proposed rule revisions are not expected to result in increased costs to NPDES dischargers or the regulated community at large and in some cases add increased flexibility for meeting the existing requirements.

Definitions

Item (3) of the Rule was updated to include definitions for the terms “Active Allocation”, “Association”, “Limit” and “Reserve Allocation”. Definitions for these terms are already provided in the TPBA Group NPDES Permit. The definitions added to the Rule are similar in meaning to those included in the permit but have been simplified to provide better clarity in the context of the Rule.

Combined N&P Discharge Allocations for TPBA

A new Item (4) was added to the Rule to specify the combined end-of-pipe nitrogen and phosphorus discharge allocations for the existing 15-member Association of point source dischargers. The combined annual allocations of 891,271 pounds of nitrogen and 161,070 pounds of phosphorus per year come directly from the TPBA Group NPDES Permit and were derived from the 1995 TMDL for the Tar-Pamlico Estuary and the Agreement. This item continues the long-standing group compliance approach requiring the Association not exceed its nutrient discharge allocations plus any nutrient offset credits obtained in accordance with G.S. 143-214.26 and the Nutrient Offset Rule (.0703).

This item also includes new language referencing the other parts of the Rule (Items (7) through (9)) that allow for the group discharge cap to be modified in the future through either the expansions of existing dischargers, the addition of new members to the Association or transfers when a discharger accepts discharge from another facility. Adding this language to the Rule provides additional clarity and recognizes the allocations provided in the Rule are dynamic and any future changes to these allocations would be reflected in changes to the group NPDES permit. This is not a change to how adjustments to allocations are implemented. This language was added simply for clarification purposes to address comments provided by the Tar-Pam Basin Association.

Individual N&P Discharger Allocations for TPBA Members

A new Item (5) provides the nitrogen and phosphorus discharge allocations for each of the fifteen dischargers that are members of the TPBA. These allocations come directly from Appendix A of the TPBA Group NPDES permit which were derived from the 1995 TMDL for the Tar-Pamlico Estuary and the Agreement. The sum of the individual allocations in this item equals the combined group caps described in Item (4) of the Rule. These individual allocations are also included in each of the discharger’s individual NPDES permits. As with Item (4) this Item was also updated to included references to the other parts of the Rule allowing for changes to individual nitrogen and phosphorus allocations that would be reflected through updates to the group NPDES permit. Again, this language was added to address comments provided by the Tar-Pam Basin Association.

Nutrient Offset Option for TPBA

Item (5) also includes the provision allowing TPBA members to offset cap exceedances in a given year though the purchase of nutrient offsets in accordance with the Nutrient Offset Rule NCAC 02B .0703. Referencing the nutrient offset rule as the foundation for acquiring offset credits will invoke existing market-based rates set by private mitigation bankers or the Division of Mitigation Services. This is an improvement on the current approach that utilizes an outdated fixed ($13.15 per pound TN) nutrient offset payment rate paid to fund Ag BMPs through the Ag Cost Share Program and squares the offset option for the Association with the offset option already in the .0733 rule for new and expanding dischargers.

Nutrient Controls for New Dischargers

The language in Item (6) has been reorganized for clarity but adds no new treatment requirements for new facilities. New dischargers continue to have the option to acquire existing allocation or nutrient offset credits to offset the nutrient load from the proposed new discharge as already provided in the current rule. The only

substantive update to this Item is the addition of the provision giving new facilities the option to request the use of reserve allocation to offset the proposed new discharge. Use of reserve allocation is contingent upon approval from the Division.

Nutrient Controls for Expanding Dischargers

The language in Item (7) has been reorganized for clarity but adds no new treatment requirements for expanding facilities. The language has been updated to include a minimum flow threshold requiring facilities expanding to permitted flows greater than 100,000 gallons per day be assigned nitrogen and phosphorus allocations. The current rule does not include a minimum threshold meaning an expansion of any size would be subject to the requirements and assigned nitrogen and phosphorus allocations. All of the Tar-Pam Basin Association dischargers already have permitted flows greater than 100,000 gallons a day so this provision would only apply to handful of small non-Association facilities in the basin should they ever look to increase their discharge. There has not been an expansion request from any of the non-Association facilities since the past two decades while the current rule has been in place

The addition of this minimum flow threshold serves as a benefit for smaller facilities serving a smaller population as they are unlikely to have the space or the tax base available to fund upgrades to their facilities to achieve treatment levels to achieve the equivalent discharge concentrations needed to meet assigned nutrient allocations. Additionally, given their small size and limited flow, such relatively small expansions are not considered to pose a risk to nutrient loading or water quality in the Tar-Pamlico estuary.

The inclusion of a minimum flow threshold does not change the requirements already in place for the expanding dischargers that exceed the flow threshold. Expanding dischargers continue to have the option to acquire existing allocation or nutrient offset credits to offset the proposed increased discharge as already provided in the current rule. This Item has been updated to also add the option for expanding facilities to request the use of reserve allocation to offset the proposed increased discharge. Use of reserve allocation for expansions is contingent upon approval from both the Division and the TPBA.

Revisions to nutrient controls for expanding dischargers also includes the proposed deletion of the language in Sub-Item (6)(g) of the current rule. The language being proposed for deletion currently allows for those facilities expanding to a permitted flow of greater than 0.5 MGD that are already meeting specific treatment criteria to petition the Director for an exemption from the requirements of the Rule calling on them to treat to best available technology. In order to qualify for such an exemption, the expanding facility would first need to demonstrate that they have already achieved the reduction goals of the nutrient strategy and that the proposed expansion would not exceed those goals. Specifically, they would need to demonstrate that pre-expansion they have reduced their annual average nitrogen and phosphorus loading by 30% from their 1991 loading levels. Similarly, they would also need to demonstrate that post-expansion their annual average nitrogen and phosphorus loading is not greater than 70 percent of their 1991 loading levels.

This exemption provision in the Rule has never been utilized and is extremely unlikely to be used in the future. Its use is considered very unlikely since there have been zero expansion requests since the nutrient strategy was first implemented 25 years ago. Also, there only a small number of facilities in the basin that meet the flow qualifications and those that do serve such small populations and have experienced such little population growth, if any at all, that the likelihood of them ever needing to expand is considered highly unlikely. For these reasons staff believe the deletion of the language in the Sub-Item (6)(g) will not result in any new costs to local governments or the regulated community.

Reserve Allocation

As noted above, both Items (6) and (7) of the Rule include a provision allowing new and expanding Association and Non-Association dischargers to request use of reserve allocation to offset their new or expanding nutrient load. Use of reserve allocation is a new option providing additional flexibility for new and expanding dischargers to offset their loads and meet the requirements of the Rule. This reserve allocation is noted in the table in Item (5) of the Rule and is the result of an industrial discharger ceasing its discharger at the end of 2004 and terminating its membership in the TPBA. As a result, the departing facilities 59,798 lb/yr TN and 3,898 lb/yr TP allocations were removed from the Associations group cap at that time.

Under Item (6) of the proposed rule revision new proposed facilities can submit a request to the Division to use a portion of the reserve allocation. Similarly, as provided in Item (7) of the Rule, expanding facilities can also request use of the reserve allocation. Item (7)(e) also requires any expanding facility (both non-Association and Association) that requests use of reserve allocation to have its discharge limits assigned using mass equivalent concentrations of 3.5 mg/L TN and 0.5 mg/L TP.

Use of reserve allocation by a proposed new facility or proposed expanding facility is contingent upon approval from both the Division and the TPBA.

Group Compliance Association Option

A new Item (8) simply serves to codify the option dischargers in the basin have to form a group compliance association or join an existing association and collectively meet their nitrogen and phosphorus load limits. Sub-Item (8)(a) through (8)(h) lay out the key elements for forming group compliance association that mimics how the current TPBA operates per the requirements in their Group Permit.

One provision of note in this Item is the recognition of “existing offset credits” in Sub-Item (8)(f). This provision allows an Association to use offset credits that have been previously acquired. In the case of the TPBA, this recognizes that the Association continues to have the option, as provided under the Phase IV Agreement to use offset credits they have previously acquired under the Agreement to offset a future exceedance. The TPBA currently has 59,297 existing offset credits available for use for a one-time offset.

The criteria for how these banked offset credits can be used is currently only addressed in the Phase IV Agreement and the criteria for their use will be formalized in the TPBA Group Permit during the next permit renewal cycle. Since the current TPBA group permit does not contain any language addressing the use of existing offset credits, adding this language to the Rule creates a clear regulatory pathway for the Association for using this option after the Phase IV Agreement expires in 2025. Ensuring the continued availability of this option also helps avoid the potential additional costs associated with the other offset options available, like purchasing allocation from another discharger or purchasing offset credits from a private mitigation banker.

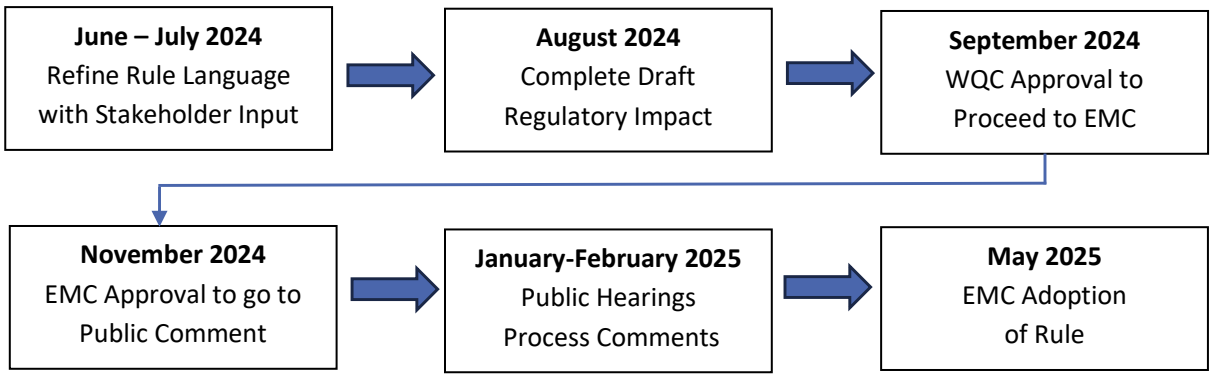
Transfers

A new Item (9) was added to recognize that any discharger who accepts wastewater from another permitted facility that results in the elimination of the other discharge will have the eliminated facilities nitrogen and phosphorus allocations transferred into the receiving facilities NPDES permit and added to the accepting discharger’s allocation. The transfer of allocation to the facility receiving the wastewater is currently recognized in the TPBA group permit where it is referred to as “regionalization.”

Rule Readoption Timeline

The Division has been working closely with stakeholders on the development of the proposed rule revisions in order to have the revised rules approved with an effective date of June 1, 2025. This target effective date was chosen to ensure the requirements for the TPBA are codified in rule by the time the Phase IV agreement expires at the end of May 2025. The individual steps of the rule readoption timeline are provided in Figure 2 below.

Figure 2. Timeline for Readoption of Rule NCAC 02B .0733



Summary of Impacts

The proposed revisions to NCAC 02B .0733 serve to codify existing requirements from the TPBA Group NPDES Permit and additional options for meeting those existing requirements. Furthermore, the requirements already in rule for new and expanding dischargers remain unchanged. As such, none of the proposed rule revisions result in increased costs to the regulated community or state or local governments operations. In fact, the proposed revisions provide multiple benefits. They add clarity to the rule requirements, establish clear regulatory pathways to available compliance options, and add flexibility to meeting the existing permit requirements through the addition of new options. These benefits are briefly summarized by in the sections below.

Impacts to New & Expanding Dischargers

The requirements for new and expanding dischargers remain unchanged in the proposed rule and do not represent any new costs to the regulated community. The most notable addition creating a benefit for new and expanding dischargers is the provision giving both new and expanding dischargers the option to request approval to use reserve allocation for the purpose of offsetting an approved new or increase in discharge. This update adds flexibility by adding a new option for meeting existing requirements and does not preclude dischargers from exploring other available options to offset their new or proposed increased discharge, which they may determine to be more cost-effective depending on their circumstance. The other available options include the purchase or lease of allocation from existing facilities or the purchase of offset credits in accordance to rule .0703. Additionally, under the provisions of their Group NPDES permit the TPBA retains the ability to reapportion their TN and TP allocations among themselves at any time and notify the Division to incorporate the resulting changes in the permit.

Impacts to Existing Discharger Requirements

The nutrient allocations and group compliance framework for existing dischargers remain unchanged in the proposed rule revisions and do not represent any new costs.

One notable provision added to the Rule is the recognition of "existing offset credits" in Sub-Item (8)(f). This provision allows an Association to use offset credits that have been previously acquired. Since the current TPBA group permit does not contain any language addressing the use of existing offset credits, adding this language to the Rule creates a clear regulatory pathway for the Association for using this option after the Phase IV Agreement expires in 2025. Ensuring the continued availability of this option also helps avoid the potential additional costs associated with the other offset options available, like purchasing allocation from another discharger or purchasing offset credits from a private mitigation banker.

The other notable update to the rule impacting existing dischargers is the transition away from using the dated $13.15 per pound of nitrogen flat rate to purchase nutrient offsets by funding agriculture best management practices through the state's Agriculture Cost Share Program. Instead, the rule has been updated to require offsets be acquired in accordance with the nutrient offset rule (.0703) which will invoke existing market-based rates set by private mitigation bankers or the Division of Mitigation Services (DMS). This aligns the offset option for the Association with the offset option already in the .0733 rule for new and expanding dischargers.

Utilizing the existing framework of the .0703 rule has the added benefit of addressing the need for both nitrogen and phosphorus offsets versus a fixed offset rate that is reflective of nitrogen only as is currently in the Group NPDES permit via reference to the Phase IV Agreement. The costs of both nitrogen and phosphorus credits are publicly available and are established according to a rule-based actual cost method. Current offset rates published on the DMS website for the Tar-Pamlico River Basin are $12.37 per pound of nitrogen and $190.31 per pound of phosphorus.

The TPBA Group Permit and Phase IV Agreement are silent on a phosphorus offset so utilizing the nutrient offset rule and established market-based rates provides a viable regulatory pathway to provide a nitrogen and phosphorus offset option while ensuring the offset payments received are sufficient to fund the appropriate offsets.

Impacts to State & Local Governments

None of the proposed revisions to Rule 15A NCAC 02B .0733 require any changes to the operations of federal, state, or local government. As such the proposed revisions do not result in any new cost but do provide benefits to both the state and local governments. The state benefits through the rules improved clarity and enforceability by creating a more direct link between the requirements put forth in the Rule and what is called for in the NPDES permits. This has the added benefit of serving to help to avoid potentially time-consuming legal challenges to requirements in the permits. Likewise, local governments benefit from the improved clarity of the rule allowing for easier interpretation of the requirements, the clear regulatory pathways it establishes for the compliance options available to their locally operated municipal wastewater treatment plants, and the added flexibility of additional options for meeting the requirements in the rule.

Scope of Analysis: Assumptions & Uncertainties

The scope of the proposed rule revisions and associated impact analysis is limited to NPDES permitted dischargers with a nutrient discharge located within the Tar-Pamlico River Basin. This includes fifteen Municipal Wastewater Dischargers that are currently members of the TPBA, eleven non-association municipal and domestic dischargers, and ten industrial dischargers. When considering potential impacts of the proposed rule revisions staff considered the limitations and uncertainties as they relate to current performance of the TPBA, changes in population and

flow trends in the basin over the past two decades, and the likelihood of future expansion and new discharger requests. Each of these factors are discussed in more detail below.

TPBA Nutrient Reductions Performance

Since the first phase of the Agreement was initiated in 1990 the TPBA has consistently discharged below their collective nitrogen and phosphorus allocations. In almost 35 years of operating under the Agreement they have not once needed to purchase credits to offset a cap exceedance. In 2023 the TPBA collectively discharged 70% of their permitted TN load and 68% of their permitted TP load. The combined average effluent concentrations for the Association in 2023 were 6.93 mg/L TN and 1.21 mg/L TP. For comparison, at their full permitted flow the equivalent concentrations for the current TPBA nutrient caps would be on average 4.7 mg/L TN and 0.84 mg/L TP.

Considering the TPBA has remained consistently below the discharge caps for the past several decades staff believe it is unlikely that any of its members will need to request a discharge expansion for at least the next ten years. The 2023 TPBA performance data is summarized in Table 2 below.

Table 2. Tar-Pamlico Basin Association Performance (2023)

TPBA Performance, 2023	TN	TP
Permitted Cap (lbs.)	891,271	161,070
Loading (lbs.)	627,985	109,790
Cap Room (lbs.)	263,286	51,280
% TPBA Cap	70%	68%
Average Effluent Concentration (mg/L)	6.93	1.21

Population Growth in Tar-Pamlico River Basin

The Division also reviewed population data for the areas of the basin served by the TPBA dischargers to evaluate growth trends. According to US Census population data, the population Tar-Pamlico River Basin saw only a slight increase of 5.13% over the 20-year period between 2000-2020. That is an average annual population growth of just 0.25% for the basin. Of the fifteen TPBA members only four serve areas that have experienced population increases during that time-period: Greenville, Franklin County, Oxford, and Washington (Table 3).

For this analysis staff assume the entire population of the basin is served by municipal sewer and did not consider that a portion of the population is serviced by onsite wastewater (septic) systems. As a result, this analysis likely overestimates the population served by the municipal wastewater treatment systems in the basin. While economic development remains a priority for the local governments in the Tar-Pamlico River Basin, population growth trends in this watershed do not indicate a growing domestic demand. At this time, the Division is not aware of any pressing domestic expansion needs in the basin.

Table 3. Population Growth of TPBA Service Areas (2000 – 2020)

Facility	2000 Population	2020 Population	Change in Population	% Change in Population
Belhaven	1,937	1,413	-524	-27.1%
Bunn	396	351	-45	-11.4%
Enfield	2,625	1,864	-761	-29.0%
Franklin County	**47,611**	**70,859**	**23,248**	**48.8%**
Greenville	**63,788**	**88,098**	**24,310**	**38.1%**
Louisburg	3,025	2,921	-104	-3.4%
Oxford	**8,366**	**8,657**	**291**	**3.5%**
Pinetops	1,431	1,196	-235	-16.4%
Robersonville	1,764	1,262	-502	-28.5%
Rocky Mount	59,349	54,248	-5,101	-8.6%
Scotland Neck	2,403	1,641	-762	-31.7%
Spring Hope	1,318	1,303	-15	-1.1%
Tarboro	11,437	10,647	-790	-6.9%
Warrenton	1,132	851	-281	-24.8%
Washington	**9,616**	**9,797**	**181**	**1.9%**

TPBA Permitted Flow vs. Actual Flow

All of the major municipal dischargers in this basin are members of the Tar-Pamlico Basin Association and represent 98.7% of the total permitted flow in the basin. In 2023 the combined annual flow of the 15-member TPBA was 29.7 MGD out of a collective permitted flow of 62.3 MGD. The TPBA is currently discharging at less than half (47.6%) of their available permitted flow (Table 5). A review of the Associations historical flow data from 1991 to 2023 indicates no clear trends in flow. Given the Association members have a significant amount of room to increase their flows as a whole, staff believe it is unlikely that any of its individual members will need to request a flow expansion over the next decade.

History of New Discharge Requests in the Tar-Pamlico River Basin

There has only been limited interest in proposing new discharges in the Tar-Pamlico River Basin. Staff are aware of only two proposals in the past two decades. In 2020 Novozymes received Division approval for an NPDES permit for a new 2.0 MGD discharge facility to discharge treated process wastewater. Novozymes met the new discharge requirements of the .0733 rule by purchasing the appropriate nutrient offsets from a private mitigation bank. The only other new discharge proposed in the Tar-Pamlico Basin over the past two decades was a proposed discharge from Creedmoor in 2010. This proposal did not go beyond the engineering analysis stage and ultimately Creedmoor chose not to apply for a NPDES permit in the Tar-Pamlico Basin and continues its discharge to the Neuse River Basin.

Table 4. TPBA Permitted Flows vs 2023 Average Flows

NPDES Permit No.	Facility	Permitted Flow (MGD)	2023 Flow (MGD)	% of Flow Used
NC0020435	Pinetops	0.30	0.206	68.7%
NC0023931	Greenville	17.50	11.250	64.3%
NC0020648	Washington	3.65	2.329	63.8%
NC0042269	Bunn	0.15	.080	52.4%
NC0030317	Rocky Mount	21.00	9.923	47.3%
NC0069311	Franklin County	3.00	1.281	42.7%
NC0020231	Louisburg	1.37	0.576	42.0%
NC0025402	Enfield	1.00	0.336	33.6%
NC0020605	Tarboro	5.00	1.523	30.5%
NC0023337	Scotland Neck	0.68	0.206	30.3%
NC0025054	Oxford	3.50	1.038	29.7%
NC0020061	Spring Hope	0.40	0.100	25.0%
NC0026492	Belhaven	1.00	0.233	23.3%
NC0020834	Warrenton	2.00	0.426	21.3%
NC0026042	Robersonville	1.80	0.304	16.9%
Total		**62.345 MGD**	**29.755 MGD**	**47.6%**

Conclusion

The need to put the existing point source requirements contained in the TPBA Group NPDES permit and Agreement in rule is driven by increasing pressure on the Division to ensure that requirements imposed on the regulated community that meet the Administrative Procedure Act (APA) definition of a rule are in fact codified in rule. Codifying the point source requirements in rule not only accomplishes satisfying the requirements of the APA, but it also has the added benefit of establishing a more enforceable foundation for the TMDL driven requirements of the nutrient management strategy and helps avoid future potential legal challenges to the requirements in the Association's NPDES Group Permit which has incorporated key requirements of the Agreement over time.

As this analysis has demonstrated, none of the proposed revisions to the Rule change the nutrient allocations assigned to the individual TPBA members or the core elements of the long-standing group compliance framework the Association currently operates under. These revisions are not expected to result in increased costs to any state, federal, or local government agency or any member of the regulated community. However, while they do not result in any new costs, the updates proposed create notable benefits for dischargers by providing additional options for meeting implementation requirements such as allowing the use of reserve allocation and existing offset credits.

Likewise, the proposed revisions will not result in increased costs to any state, federal, or local government. They do however provide several benefits like clarifying the procedural aspects for how the NPDES permit requirements are implemented, increasing enforceability by establishing a more direct link between the rule and permit, and

providing clear regulatory pathways for using both current and new options for meeting the discharge treatment and nutrient offset requirements of their individual and group NPDES permits.

Appendices

Appendix A – Proposed Rule Text – 15A NCAC 02B .0733

Appendix B – TPBA NPDES Group Permit

Appendix C – Phase IV Agreement

Appendix A – Proposed Rule Text – 15A NCAC 02B .0733

15A NCAC 02B .0733 TAR-PAMLICO NUTRIENT STRATEGY: WASTEWATER DISCHARGE REQUIREMENTS ~~NEW AND EXPANDING WASTEWATER DISCHARGER REQUIREMENTS~~

The following is the National Pollutant Discharge Elimination System (NPDES) wastewater discharge management strategy for ~~new and expanding wastewater dischargers in~~ the Tar-Pamlico River basin:

(1) Purpose. The purpose of this Rule is to establish minimum nutrient control requirements for ~~new and expanding~~ point source discharges in the Tar-Pamlico River Basin in order to maintain or restore water quality in the Pamlico Estuary and protect its designated uses.

(2) Applicability. This Rule applies to all discharges from wastewater treatment facilities in the Tar-Pamlico River Basin that receive nitrogen- or phosphorus-bearing wastewater and are required to obtain individual NPDES permits. ~~This Rule applies to Tar Pamlico Basin Association member facilities on or after June 1, 2025. This Rule applies to other facilities upon this Rule's effective date.~~

(3) Definitions. The terms used in this Rule, in regard to point source dischargers, treatment facilities, wastewater flows or discharges, or like matters, shall be as defined in Rule .0701 of this Section and as follows:

(a) "Active Allocation" means that portion of an allocation that has been applied toward and is expressed as a nutrient limit in an individual NPDES permit.

(b) "Association" means the Tar-Pamlico Basin Association, a not-for-profit corporation consisting of NPDES-permitted dischargers in the Tar-Pamlico River Basin; established voluntarily by its members to work cooperatively to meet the aggregate TN and TP allocations originally established in the Tar-Pamlico Nutrient TMDL and subsequently in the group permit.

~~(a)~~(c) "Existing" means that which obtained an NPDES permit on or before December 8, 1994.

~~(b)~~(d) "Expanding" means that which increases beyond its permitted flow as defined in in this Item. ~~Item (4) of this Rule.~~

(e) "Limit" means the mass quantity of nitrogen or phosphorus that a discharger or group of dischargers is authorized through an NPDES permit to release into surface waters of the Tar-Pamlico River Basin.

~~(c)~~(f) "New" means that which had not obtained an NPDES permit on or before December 8, 1994.

~~(4)~~ (g) "Permitted flow" means the maximum monthly average flow authorized in a facility's NPDES permit as of December 8, 1994.

(h) "Reserve Allocation" means allocation that is held by a permittee or other person but that has not been applied toward and is not expressed as a nutrient limit in an individual NPDES permit.

(4) This Item specifies the total combined end of pipe nitrogen and phosphorus discharge allocation for existing Association point source dischargers.

(a) Unless revised as provided for in Items (7) through (9) of this Rule, in accordance with the Nitrogen and Phosphorus TMDL for the Tar-Pamlico River Estuary, approved in 1995 by the US Environmental Protection Agency (EPA), the total active nitrogen and phosphorus discharge allocations for Association point source dischargers shall not exceed 891,271 in pounds of nitrogen and 161,070 pounds of phosphorus per calendar year. The nutrient loads discharged annually by these point sources shall not exceed these nitrogen and phosphorus discharge allocations plus any nutrient offset credits obtained in accordance with G.S. 143-214.26 and Rule .0703 of this Section. In the event the Association's allocations are revised as provided for in Items (7) through (9) of this Rule, the NPDES group permit shall be modified to reflect those changes to the active nitrogen and phosphorus discharge mass allocations and limits set forth in this Rule.

(b) The Commission shall order future revisions in the Nitrogen and Phosphorus TMDL and nitrogen and phosphorus discharge allocations whenever necessary to ensure that water quality in the estuary meets all applicable standards in 15A NCAC 02B .0200 or to conform with applicable State or federal requirements.

(5) This Item specifies the individual nitrogen and phosphorus discharge allocations for existing Association point source dischargers in accordance with the 1995 TMDL.

(a) Unless revised as provided for in Items (7) through (9) of this Rule, the following individual discharge mass allocations for total nitrogen and total phosphorus shall apply in conformance with the values in Item (4) of this Rule:

		Mass Allocations (pounds/year)	
Facility Name	NPDES No.	Total Nitrogen	Total Phosphorus
Belhaven	NC0026492	14,261	2,577
Bunn	NC0042269	4,278	773
Enfield	NC0025402	14,261	2,577
Franklin County	NC0069311	42,784	7,732
Greenville	NC0023931	249,576	45,103
Louisburg	NC0020231	19,538	3,531
Oxford	NC0025054	49,915	9,021
Pinetops	NC0020435	4,278	773
Robersonville	NC0026042	25,671	4,639
Rocky Mount	NC0030317	299,491	54,124
Scotland Neck	NC0023337	9,626	1,740
Spring Hope	NC0020061	5,705	1,031
Tarboro	NC0020605	71,307	12,887

Warrenton	NC0020834	28,523	5,155
Washington	NC0020648	52,054	9,407
Association Total			
Active Allocation		891,271	161,070
Allocation in Reserve		59,798	3,898

(b) In the event that the nitrogen and phosphorus TMDL and their discharge allocations for point sources are revised, as provided in Item (4) of this Rule, the Commission shall apportion the revised load among the existing facilities and shall revise discharge allocations as needed. The Commission may consider such factors as:

(i) fate and transport of nitrogen and phosphorus in the river basin;

(ii) technical feasibility and economic reasonableness of source reduction and treatment methods;

(iii) economies of scale;

(iv) nitrogen and phosphorus control measures already implemented;

(v) probable need for growth and expansion; and

(vi) incentives for nutrient management planning, utilities management, resource protection, and cooperative efforts among dischargers.

~~(5)~~(6) This Item specifies nutrient controls for new facilities.

(a) ~~Proposed new wastewater dischargers~~ New facilities proposing to discharge wastewater shall evaluate all practical alternatives to surface water discharge pursuant to 15A NCAC 02H .0105(c)(2) prior to submitting an application to discharge.

(b) New facilities shall document in their permit application that they have acquired some combination of the following allocations and offsets sufficient to meet the annual limits required elsewhere in this Item for the proposed discharge:

(i) nitrogen and phosphorus allocations from existing dischargers;

(ii) reserve allocation pursuant to Sub-Item (c) of this Item; and

(iii) nitrogen and phosphorus offset credits pursuant to Rule .0703 of this Section.

Allocation and offset credits shall be sufficient for no less than 10 subsequent years of discharge at the proposed design flow rate in accordance with 15A NCAC 02H .0112(c).

(c) New facilities proposing to use any portion of the reserve allocation described in Sub-Item (5)(a) of this Rule shall submit a written request to the Division for approval of the proposed use. The request shall include concurrence for its use by the Association.

~~(b)~~(d) New facilities shall meet ~~The~~ technology-based nitrogen and phosphorus discharge limits that shall not exceed the following: ~~for a new facility shall not exceed:~~

(i) For facilities treating municipal or domestic wastewater, the mass load equivalent to a concentration of 3.5 mg/L TN and 0.5 mg/L TP at the monthly average flow limit in the facility's NPDES permit; and

(ii) For facilities treating industrial wastewater, the mass load equivalent to the best available technology economically achievable, calculated at the monthly average flow limit in the facility's NPDES permit.

~~(c) Proposed new dischargers submitting an application shall acquire nutrient allocation from existing dischargers or nutrient offset credits pursuant to Rule .0703 of this Section for the mass load dictated by this Item. The allocation and offset credits shall be sufficient for any partial calendar year in which the permit becomes effective plus 10 subsequent years of discharge at the proposed design flow rate in accordance with 15A NCAC 02H .0112(c).~~

~~(d) The Director shall not issue a permit authorizing discharge from a new facility unless the applicant has satisfied the requirements of Sub-Items (a), (c), and (e) of this Item. If a facility's permit contains tiered flow limits for expansion, the Director shall not authorize an increased discharge unless the applicant has satisfied the requirements of Sub-Items (a), (c), and (e) of this Item.~~

(e) Subsequent applications for permit renewal or, where an existing permit will contain tiered limits, requests to discharge at an increased flow, shall demonstrate that the facility has sufficient nitrogen and phosphorus allocation or offset credits to meet its effluent nutrient limitations for any partial calendar year in which the permit becomes effective plus 10 subsequent years of discharge at ~~the proposed~~ an increased design flow rate in accordance with 15A NCAC 02H .0112(c).

(f) The Director shall not issue a permit authorizing discharge from a new facility unless the applicant has satisfied the requirements of Sub-Items (a) through (d) of this Item. If a facility's permit contains tiered flow limits for expansion, the Director shall not authorize an increased discharge unless the applicant has satisfied the same requirements of this Item.

~~(f)~~(g) The Director shall establish more stringent limits for nitrogen or phosphorus upon finding that such limits are necessary to protect water quality standards in localized areas.

~~(6)~~(7) This Item specifies nutrient controls for expanding facilities.

(a) Expanding facilities shall evaluate all practical alternatives to surface water discharge pursuant to 15A NCAC 02H .0105(c)(2) prior to submitting an application to discharge.

(b) The nitrogen and phosphorus discharge limits for expanding Non-Association facilities shall be assigned in accordance with the following:

(i) Expanding non-Association municipal or domestic wastewater facilities requesting permitted flows greater or equal to 0.1 MGD will be assigned the mass equivalent to a concentration of 3.5 mg/L TN and 0.5 mg/L TP at the monthly average flow limit in the facility's NPDES permit; and

(ii) Expanding non-Association facilities treating industrial wastewater will be assigned the mass load equivalent to the best available technology economically achievable, calculated at the monthly average flow limit in the facility's NPDES permit.

(c) An expanding facility that is a member of the Association, as defined in Sub-Item (3)(b) of this Rule, shall not exceed the nitrogen and phosphorus loads equivalent to its active allocations unless they receive Division approval for an increase in their discharge as described elsewhere in this Item.

(d) Facilities submitting application for increased discharge or, where an existing permit will contain tiered limits, for authorization to discharge at an increased flow, may acquire nitrogen and phosphorus allocations from existing dischargers or nitrogen and phosphorus offset credits pursuant to Rule .0703 of this Section, or may acquire reserve allocation in compliance with sub-Item (e) of this Item for the proposed discharge. The acquired allocations and offset credits, combined with any preexisting allocations, shall be sufficient to meet its effluent nutrient limits as established elsewhere in this item for any partial calendar year in which the permit becomes effective plus 10 subsequent years of discharge at an increased design flow rate in accordance with 15A NCAC 02H .0112(c).

(e) A facility that submits an application to increase its discharge may request approval from the Division to use a portion of the reserve allocation described in Sub-Item (5)(a) of this Rule. Approval will be based on the following criteria:

(i) The expanding facility demonstrates that upon expansion their nitrogen and phosphorus discharge would not exceed the mass load equivalent to a concentration of 3.5 mg/L TN and 0.5 mg/L TP, calculated at the monthly average flow limit in the facility's NPDES permit;

(ii) The expanding facility requesting use of reserve allocation has received written approval from the Association.

(iii) Should the facility cease to discharge, the portion of the reserve allocation that was activated will revert back to reserve allocation; and

(f) The Director shall not issue an NPDES permit authorizing increased discharge from an existing facility unless the applicant has satisfied the requirements of Sub-Items (a) through (e) of this Item. If a facility's permit contains tiered flow limits for expansion, the Director shall not authorize discharge at an increased flow unless the applicant has satisfied the same requirements of this Item.

~~(f)~~(g) The Director shall modify an expanding facility's permit to establish more stringent limits for nitrogen or phosphorus upon finding that such limits are necessary to protect water quality standards in localized areas.

~~(b) The nitrogen and phosphorus discharge limits for an expanding facility shall not exceed the greater of loads equivalent to its active allocation and offset credit, or the following technology-based mass limits:~~

~~(i) For facilities treating municipal or domestic wastewater, the mass equivalent to a concentration of 3.5 mg/L TN and 0.5 mg/L TP at the monthly average flow limit in the NPDES permit; and~~

~~(ii) For facilities treating industrial wastewater, the mass load equivalent to the best available technology economically achievable, calculated at the monthly average flow limit in the facility's NPDES permit.~~

~~(c) Facilities submitting application for increased discharge or, where an existing permit contains tiered flow limits, for authorization to discharge at an increased flow, shall acquire or demonstrate contractual agreement to acquire, prior to authorization to discharge at the increased flow, nutrient allocation from existing dischargers or nutrient offset credits pursuant to Rule .0703 of this Section for the proposed discharge above 0.5 million gallons per day (MGD). The allocation and offset credits shall be sufficient to meet its effluent nutrient limitations for any partial calendar year in which the permit becomes effective plus 10 subsequent years of discharge at the proposed design flow rate in accordance with 15A NCAC 02H .0112(c).~~

~~(d) The Director shall not issue a permit authorizing increased discharge from an existing facility unless the applicant has satisfied the requirements of Sub-Items (a), (c), and (e) of this Item. If a facility's permit contains tiered flow limits for expansion, the Director shall not authorize discharge at an increased flow unless the applicant has satisfied the requirements of Sub-Items (a), (c), and (e) of this Item.~~

~~(e) Subsequent applications for permit renewal shall demonstrate that the facility has sufficient nitrogen allocation or offset credits to meet its effluent nutrient limitations for any partial calendar year in which the permit becomes effective plus 10 subsequent years of discharge at the proposed design flow rate in accordance with 15A NCAC 02H .0112(c).~~

~~(g) Existing wastewater dischargers expanding to greater than 0.5 MGD design capacity may petition the Director for an exemption from Sub-Items (a) through (c) and (e)~~ (a), (b), (d), and (e) ~~of this Item upon meeting and maintaining all of the following conditions:~~

~~(i) The facility has reduced its annual average TN and TP loading by 30 percent from its annual average 1991 TN and TP loading. Industrial facilities may alternatively demonstrate that nitrogen and phosphorus are not part of the waste stream above background levels.~~

~~(ii) The expansion does not result in annual average TN or TP loading greater than 70 percent of the 1991 annual average TN or TP load. Permit limits shall be established to ensure that the 70 percent load is not exceeded.~~

(8) This Item describes the option for dischargers to form a group compliance association or join an existing group compliance association, to collectively meet nitrogen and phosphorus load limits.

(a) Any or all facilities within the basin may form a group compliance association or join an existing group compliance association, to meet nitrogen and phosphorus limits collectively. Any ~~such~~ new association formed shall apply for and shall be subject to an NPDES group permit that establishes the effective total nitrogen and phosphorus limits for the association and for its members. More than one group compliance association may be established. No facility may be a co-permittee member of more than one association formed pursuant to this Rule at any given time.

(b) An association may modify its membership at any time upon notification to the Division. At such time, the Division shall adjust the nitrogen and phosphorus allocations and limits in the NPDES group permit to reflect the change in membership.

(c) No later than 180 days prior to coverage under a new NPDES group permit, or expiration of an existing group permit, the association and its members shall submit an application for an NPDES permit for the discharge of total nitrogen and total phosphorus to the surface waters of the Tar-Pamlico River Basin. The NPDES group permit shall be issued to the association and its members as co-permittees.

(d) An association's limit of total nitrogen and total phosphorus shall be the sum of its members' individual allocations and nutrient offset credits plus any other allocation and offset credits obtained by the association or its members pursuant to this strategy.

(e) An association and its members may reapportion their individual allocations and nutrient offset credits on an annual basis. The NPDES group permit shall be modified to reflect the revised individual allocations and limits.

(f) If an association does not meet its limits in any year, it shall obtain or use existing nutrient offset credits in accordance with G.S. 143-214.26 and Rule .0703 of this Section to offset its mass exceedance no later than July 1 of the following year.

(g) An association’s members shall be deemed compliant with the permit limits for total nitrogen and total phosphorus contained in their individually issued NPDES permits while they are members in an association. An association’s members shall be deemed compliant with their individual limits in the NPDES group permit in any year in which the association is in compliance with its limit. If the association exceeds its group limit, the association and any members that exceed their individual limits in the NPDES group permit shall be deemed to be out of compliance with the group permit.

(h) Upon the termination of a group compliance association, members of the association shall be subject to the limits and other nutrient requirements of their individual NPDES permits.

(9) If an NPDES-permitted discharger or association of dischargers accepts wastewater from another NPDES-permitted treatment facility in the Tar-Pamlico River Basin and that acceptance results in

the elimination of the discharge from that other treatment facility, the eliminated facility's total nitrogen and phosphorus allocations shall be transferred into the receiving facility's NPDES permit and added to its allocations.

History Note: *Authority G.S. 143-214.1; 143-215.1; 143-215.3(a)(1); 143-215.8B; 143B-282;*
Eff. April 1, 1997;
Recodified from 15A NCAC 02B .0229 Eff. April 1, 2020;
Readopted April 1, 2020.
Amended Eff. June 1, 2025.

Appendix B – Tar-Pam Basin Association Group Permit

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
S. DANIEL SMITH
Director

NORTH CAROLINA
Environmental Quality

December 16, 2020

Mr. David Springer, Chairman
Tar-Pamlico Basin Association
P.O. Box 1847
Greenville, North Carolina 27835

Subject: Issuance of NPDES Permit NCC000002
Tar-Pamlico Basin Association

Dear Mr. Springer:

In accordance with the application received on June 29, 2020, the Division is forwarding herewith the subject NPDES group permit issued to the Tar-Pamlico Basin Association and its co-permittee members. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

The Division invited comments on the draft permit and received comments from the Permittee and the Division's Raleigh Regional Office staff. The final permit and fact sheet include the following changes:

- Unassigned Nutrient Allocations. The Fact Sheet has been revised to clarify that the Division still considers the unassigned TN & TP allocations (associated with the National Spinning facility) to be available for use by a future discharger, provided that their use is consistent with the Tar-Pamlico Nutrient TMDL, the Phase IV Nutrient Sensitive Waters Agreement, and other applicable requirements. In the meantime, the allocations will be held in reserve.
- Reporting Date. The due date for the Association's Five-Year Report, Condition A.(5.)(e.), has been corrected to July 1, 2025.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of

Water Resources or any other Federal, State, or Local governmental permits that may be required.

If you have any questions concerning this permit, please contact Mike Templeton at (919) 807-6402, or by e-mail at *mike.templeton@ncdenr.gov*.

Sincerely,

for S. Daniel Smith

Enclosures: NPDES Permit NCC000002
Fact Sheet
Response to Comments

eCopies: NPDES Permitting Section, EPA Region 4 (SIC 4952)
Raleigh and Washington Regional Offices, WQ Programs
Heather Deck, Sound Rivers, Inc.
Nora Deamer, Basin Planning Branch
WSS/ Ecosystems Unit

Copies: NPDES Unit Files

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

Tar-Pamlico Basin Association and Its Co-Permittee Members

are hereby authorized to discharge Total Nitrogen and Total Phosphorus from the Co-Permittee Member treatment facilities listed herein to receiving waters in the Tar-Pamlico River Basin in accordance with effluent limitations, reporting requirements, and other conditions set forth in this permit.

The conditions in this group permit supplement the conditions in the Co-Permittee Members' individual NPDES wastewater permits. Together, the group and individual permits establish an integrated set of nutrient control requirements to achieve the aims of the *Tar-Pamlico Estuary Nutrient TMDL (1995)* in a manner consistent with the *Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy*, as revised. All conditions in the Co-Permittee Members' individual permits remain in full effect except as specifically provided in those permits.

This permit shall become effective .....January 1, 2021.

This permit and the authorization to discharge shall expire at midnight on .....December 31, 2025.

Signed this day.....December 16, 2020.

for S. Daniel Smith, Director
Division of Water Resources
By Authority of the Environmental Management Commission

TABLE OF CONTENTS

PART I
SPECIAL CONDITIONS

A.(1.) DEFINITIONS

(a.) Agreement: The Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy: Phase IV Agreement, adopted July 9, 2015, and subsequent revisions.

(b.) Active Allocation: Allocation that is included in calculation of nutrient load limits. Allocation held by a permittee is active by default but may be designated as reserve allocation by the Division or at the request of the permittee. (See also Reserve Allocation.)

(c.) Allocation (or "TN (or TP) Allocation"): (1) The mass quantity (as of TN or TP) that a discharger or group of dischargers (such as the Association) is potentially allowed to release to surface waters in a calendar year in accordance with the Tar-Pamlico Nutrient TMDL and Agreement. TN (or TP) Allocations may be expressed as active or reserve allocation. (2) In practice, the term can refer to a permittee's or group's allocation as a whole or to some portion of those values.

(d.) Association: The Tar-Pamlico Basin Association, a not-for-profit corporation consisting of NPDES-permitted dischargers in the Tar-Pamlico River Basin; established voluntarily by its members to work cooperatively to meet the aggregate TN and TP Allocations established in the Tar-Pamlico Nutrient TMDL and the Agreement.

(e.) Co-Permittee Members: Those NPDES dischargers that in a given calendar year are members of the Association and are listed in Appendix A of this permit.

(f.) Limitation (or "TN (or TP) Limit(ation)" or "TN (or TP) Load Limit(ation)"): The mass quantity, such as of TN (or TP), specified in an NPDES permit as the maximum that an individual discharger or group of dischargers is authorized to discharge to surface waters in a calendar year. The TN (or TP) Limitation is the sum of active allocations held by an individual Co-Permittee Member (in the case of individual limitations) or held in the aggregate by the Association and its Co-Permittee Members (in the case of group limitations).

(g.) Load (or "TN (or TP) Load"): The actual mass quantity (as of TN or TP) that a discharger or group of dischargers releases into surface waters of the Tar-Pamlico River Basin.

(h.) Regionalization: The consolidation of wastewater collection and/or treatment systems that results in the elimination of one or more NPDES-permitted discharges.

(i.) Reserve Allocation: Allocation that is not included in the calculation of nutrient limits. The Division may designate allocation as reserve when water quality-based effluent limitations are established to prevent localized impacts and render that allocation inactive, when treatment of the allocation as active would be inconsistent with the Tar-Pamlico Nutrient TMDL or the Agreement; or at the request of the member or the association holding the allocation. (See also Active Allocation, WQBELs.)

(j.) Total Maximum Daily Load (of TMDL): (1) Generally, the allowable load of a pollutant that can be discharged to a water body without causing loss of that water's designated uses. (2) In the context of this permit, refers to the 1995 nutrient TMDL for the Tar-Pamlico River Estuary, approved by the U.S. Environmental Protection Agency on August 10, 1995, and any subsequent revisions approved by the EPA.

(k.) Total Nitrogen (TN): The sum of the organic, nitrate, nitrite, and ammonia species of nitrogen in a water or wastewater.

(l.) Total Phosphorus (TP): The sum of the orthophosphate, polyphosphate and organic phosphate species of phosphorus in a water or wastewater.

(m.) Water Quality-Based Effluent Limitations (WQBELs): Limitations calculated specifically to ensure that a discharge does not cause an exceedance of water quality standards in waters

upstream of the Pamlico Estuary. In the context of this permit, individual WQBELs pertain only to Total Nitrogen and Total Phosphorus limits for individual co-permittee members.

A.(2.) CO-PERMITTEE TN AND TP ALLOCATIONS

(a.) Co-Permittees to this permit shall be the Tar-Pamlico Basin Association (the "Association") and each of its Co-Permittee Members. The Co-Permittee Members, the Members' individual TN and TP allocations/ limits, and the Association TN and TP allocations/ limits shall be as listed in Appendix A, which is hereby incorporated into this permit in its entirety.

(b.) Upon timely and proper notification by the Association as described elsewhere in this permit or in regulation, the Division shall revise Appendix A to incorporate changes in Association membership, allowable changes in TN and TP allocations/ limits, or reapportionment of allocations by the Association and the Co-Permittee Members.

(i.) Changes in membership.

(A) Enrollment. In the event that a discharger is admitted to the Association, the Division shall add the discharger and its TN and TP allocations to Appendix A as a Co-Permittee Member and adjust the Association's allocations/ limits accordingly.

(B) Termination. In the event that a Member ceases to be a Co-Permittee to this permit or its membership is terminated, the Division shall delete the Member and its TN and TP allocations from Appendix A and adjust the Association's allocations/ limits accordingly.

(ii.) For the purposes of this permit, allowable changes in TN and TP allocations/ limits include those resulting from purchase of allocation or offsets from the NC Agriculture Cost Share Program or other authorized source; purchase, sale, trade, or lease of allocation among the Association, its members, and non-member dischargers; regionalization; and other transactions approved by the Division.

(iii.) The Association and its Co-Permittee Members may reapportion their TN and TP allocations among themselves; however, the Division shall modify this permit to incorporate the resulting changes into Appendix A only when specifically requested in writing by the Association and after such changes have been incorporated into the affected individual permits at the request of the permittees.

(c.) For the purposes of this permit, Association membership, individual or Association TN and TP allocations and associated limits, and allocation status (active or reserve) are effective on a calendar year basis, and any changes shall become effective no sooner than January 1 of the following calendar year.

A.(3.) EFFLUENT LIMITATIONS

(a.) Beginning on the effective date of this permit and lasting no later than the expiration date, the Co-Permittees are authorized to discharge Total Nitrogen (TN) and Total Phosphorus (TP) from the treatment facilities listed in Appendix A subject to the following effluent limitations.

(i.) For the purposes of this permit, compliance with TN and TP Limitations shall be determined separately, and non-compliance with a TN Limitation shall not signify non-compliance with the corresponding TP Limitation, and vice versa.

(ii.) Association TN and TP Limitations. In any calendar year, the Association's TN and TP Loads shall not exceed its TN or TP Limitations as specified in Appendix A.

(iii.) Co-Permittee Member TN and TP Limitations. In any calendar year, a Co-Permittee Member shall be in compliance with its TN (or TP) Limitation in Appendix A if:

(A) the Association TN (or TP) Load does not exceed the Association TN (or TP) Limitation in Appendix A, or

(B) in the event that the Association TN (or TP) Load exceeds its TN (or TP) Limitation, the Co-Permittee Member's individual TN (or TP) Load does not exceed that Member's TN (or TP) Limitation in Appendix A.

(b.) Individual WQBELs: If the Division determines that a Co-Permittee Member's TN or TP discharge has reasonable potential to cause localized water quality impacts upstream of the Tar-Pamlico estuary, it may further restrict the discharge of the nutrient(s) of concern to prevent the localized impact. The Division will then propose to incorporate the new limit(s) into the Member's individual NPDES permit and this group permit according to standard permitting procedures. Once an individual WQBEL becomes effective in this group permit, the Member is subject to the new limit in lieu of the Association TN or TP Limit.

(c.) Other Individual Limitations. In the event that a Co-Permittee Member's membership in the Association is terminated, the departing Member shall no longer be eligible for coverage under this permit and shall become subject to the TN and TP limitations set forth in its individual NPDES permit.

(i.) Termination of co-permittee status and re-imposition of a discharger's individual TN and TP limitations shall become effective only at the beginning of a calendar year (January 1).

(ii.) The Association shall notify the Division if it determines that any Member will depart at the end of a calendar year and shall provide an accounting of all allowable changes in the Member's TN and TP Allocations since the most recent issuance of the departing Member's individual NPDES permit.

(iii.) Upon receipt of the notification and accounting described above, the Division shall modify the TN and TP limitations in the departing Member's individual NPDES permit as necessary, effective January 1 of the succeeding year, to reflect all allowable changes in the outgoing Member's TN and TP Allocations, and shall also modify Appendix A of this permit accordingly.

A.(4.) MONITORING REQUIREMENTS

(a.) Each Co-Permittee Member shall continue to monitor its discharge(s) and report the results to the Division as specified in its individual NPDES permit.

(b.) The Association shall assemble the results of its Co-Permittee Members and report the combined results to the Division as specified in Condition A.(5.), below.

A.(5.) REPORTING REQUIREMENTS

(a.) The Association shall serve as the primary point of contact between the Division and the Co-Permittee Members on matters related to this permit, unless otherwise noted. The Association's responsibilities in this regard include:

(i.) preparation and submittal of any reports required by this permit or of related information requested by the Division;

(ii.) submittal of any request for modification or renewal of this permit; and

(iii.) distribution to the Co-Permittee Members of correspondence from the Division, including but not limited to that pertaining to permit issuance, modification, and renewal; compliance; and reporting.

(b.) Notification of Membership/ Allocation Changes. No later than July 1 of each year, the Association shall request, as necessary and in writing, modification of this permit to reflect changes in membership or in TN or TP allocations to become effective in the following calendar year. The Association may revise its request through proper written notification.

(c.) Year-End Report. No later than March 31 of each year, the Association shall submit a year-end report to the Division. The report shall include, at a minimum, the following information for the previous calendar year:

(i.) a tabular summary of the total and individual TN and TP Loads discharged by the Association and its Co-Permittee Members during the year;
(ii.) a summary of changes in Association membership; and
(iii.) a summary of all regionalization of discharges, purchases, sales, trades, leases, and other transactions affecting the TN or TP Allocations of the Association or its Co-Permittee Members.

(d.) Annual Loading Projections; Progress Reports. If the Association exceeds 85% of its TN or TP limitation in any calendar year, the Association shall, no later than July 1 of the following year, develop annual loading projections of its co-permittee members' discharges, evaluate the effectiveness of the members' nutrient controls, identify improvements sufficient to ensure continued compliance with the nutrient limits, and submit to the Division a report of its findings, proposed treatment improvements and related actions, and a timeline for implementing the proposed measures. If necessary controls cannot be implemented in time to prevent exceedance of the existing TN or TP limitation, the Association shall purchase offset credit(s) in advance according to Condition A.(6.)(b.), below.

(e.) Five-Year Report. No later than July 1, 2025, in conjunction with application for renewal of this permit, the Association shall submit a 5-year report to the Division. The report shall include, at a minimum, the following information:

(i.) a detailed summary of all membership changes and allowable changes in TN and TP Allocations of the Association or its Co-Permittee Members occurring during the term of this permit;
(ii.) a description of the Association's nutrient control strategy during that time;
(iii.) a summary of substantial new measures undertaken during that time to control nutrient discharges;
(iv.) a general assessment of progress made; and
(v.) a description of efforts planned for the upcoming permit term, if known.

A.(6.) COMPLIANCE

(a.) In the event that the Association exceeds its TN or TP Limitation in a given calendar year, the Association shall, no later than July 1 of the following year, make full and sufficient payment to the NC Agriculture Cost Share Program or other agent approved by the Division to acquire offset credits for the excess load(s) and provide documentation of the credits to the Division's Wastewater Branch.

(b.) If the annual loading projections developed for Condition A.(5.)(d.), above, indicate that the Association will likely exceed its TN or TP limitation in the coming year, the Association shall also, no later than July 1 of the current year:

(i.) acquire sufficient credits to offset the projected exceedance(s), and
(ii.) provide documentation of the credits to the Division's Wastewater Branch along with a written request and applicable fee for modification of this permit for the purpose of adding the acquired credits to the Association allocations/ limits in Appendix A.

(c.) For any calendar year in which the Association exceeds its TN or TP limitation, the Association shall be in violation of this permit, and the Division may take appropriate enforcement action against the Association.

(d.) For any calendar year in which the Association exceeds its TN or TP limitation, any Co-Permittee Member that exceeds its corresponding limitation shall also be in violation of this permit, and the Division may take appropriate enforcement action against the Member for such exceedance.

(e.) For any calendar year in which a Co-Permittee Member exceeds an individual TN (or TP) WQBEL applied to it, the Member shall be in violation of this permit, regardless of Association

compliance, and the Division may take appropriate enforcement action against the Member for such exceedance.

(f.) Submittal of offset payments shall not limit the Division's authority to enforce the terms and conditions of this permit nor shall it relieve the Association or its Co-Permittee Members of their responsibility to comply with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree. In determining the amount of any penalty to be assessed against the Association or its Co-Permittee Members, the Division shall credit the Association or its Members for any offset payments submitted by each, provided that the Association includes with the offset payment submittal an accounting of each Member's contribution.

(g.) No Co-Permittee Member shall be liable for any other Co-Permittee Member's non-compliance with this permit.

A.(7.) CALCULATION OF MASS LOADS

For the purposes of this permit, monthly and annual TN and TP Loads shall be calculated as follows:

(a.) Individual Facility Monthly TN (or TP) Load (lb/mo) = TN (or TP) x TMF x 8.34

where:

TN or TP	=	the average Total Nitrogen or Total Phosphorus concentration (mg/L) of the composite samples collected during the month
TMF	=	the Total Monthly Flow of wastewater discharged during the month (MG/mo)
8.34	=	conversion factor, from (mg/L x MG) to pounds

(b.) Individual Facility Annual TN (or TP) Load (lb/yr) = Sum of the 12 Monthly TN (or TP) Loads for the calendar year

(c.) Combined Annual TN (or TP) Load (lb/yr) = Sum of All Members' TN or (TP) Loads for the calendar year

- END OF PART I -

APPENDIX A
TAR-PAMLICO BASIN ASSOCIATION
MEMBERS/ CO-PERMITTEES AND NUTRIENT ALLOCATIONS/ LIMITS

Member/ Co-Permittee	Permit	Facility	Total Nitrogen Allocations/Limits		Total Phosphorus Allocations/Limits	
			(kg/yr)	(lb/yr)[1]	(kg/yr)	(lb/yr)[1]
1. Belhaven, Town of	NC0026492	Belhaven WWTP	6,469	14,261	1,169	2,577
2. Bunn, Town of	NC0042269	Bunn WWTP	1,941	4,278	351	773
3. Enfield, Town of	NC0025402	Enfield WWTP	6,469	14,261	1,169	2,577
4. Franklin County	NC0069311	Franklin County WWTP	19,407	42,784	3,507	7,732
5. Greenville Utilities Commission	NC0023931	GUC WWTP	113,206	249,576	20,458	45,103
6. Louisburg, Town of	NC0020231	Louisburg WWTP	8,862	19,538	1,602	3,531
7. Oxford, City of	NC0025054	Oxford WWTP	22,641	49,915	4,092	9,021
8. Pinetops, Town of	NC0020435	Pinetops WWTP	1,941	4,278	351	773
9. Robersonville, Town of	NC0026042	Robersonville WWTP	11,644	25,671	2,104	4,639
10. Rocky Mount, City of	NC0030317	Tar River Regional WWTP	135,847	299,491	24,550	54,124
11. Scotland Neck, Town of	NC0023337	Scotland Neck WWTP	4,367	9,626	789	1,740
12. Spring Hope, Town of	NC0020061	Spring Hope WWTP	2,588	5,705	468	1,031
13. Tarboro, Town of	NC0020605	Tarboro WWTP	32,345	71,307	5,845	12,887
14. Warrenton, Town of	NC0020834	Warrenton WWTP	12,938	28,523	2,338	5,155
15. Washington, City of	NC0020648	Washington WWTP	23,611	52,054	4,267	9,407
		TOTAL ALLOCATIONS	404,274	891,271	73,060	161,070
		Association Limits[2]		**891,271**		**161,070**

Footnote:

1. For the purposes of this permit, 1 kg = 2.20462 lb. Values in the table are displayed to the nearest whole kg/yr or lb/yr.
2. Association Limits may differ from the apparent sums of individual values due to the effects of rounding.

PART II
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A – APPLICABILITY OF PARTS II AND III

Parts II and III of this permit contain standard conditions that apply specifically to individual permittees that own or operate a treatment facility. These (or similar) conditions are routinely found in North Carolina's NPDES wastewater permits, including those of the Tar-Pamlico Basin Association's co-permittee members. The conditions do not necessarily apply to the Association or its members within the context of this group permit. The group permit includes those standard conditions that apply here at least in part. For the purposes of determining compliance with this permit, these conditions shall be read with the following understanding:

a. The Tar-Pamlico Basin Association serves as a governing body for its Members. It neither owns nor operates treatment facilities. Consequently, the standard conditions in Parts II and III of this permit which by their terms or meaning regulate a permittee that owns or operates a treatment facility, or which are inconsistent with the Special Conditions in Part I of this permit, shall neither be applicable to nor enforceable against the Association.

b. Each of the Co-Permittee Members governed by this Association permit owns or operates one or more treatment facilities. Each holds an individual NPDES permit for each facility and remains subject to the standard conditions in its permit(s). Consequently, the standard conditions in this Association permit shall neither be applicable to nor enforceable against the individual Co-Permittee Members under this group permit unless such is clearly consistent with the construction of the permit.

c. Wherever a standard condition in this Association permit is by its terms or meaning applicable to the Association or to the membership in its entirety, and it refers to "the permittee," it shall be construed to mean the Association and its Co-Permittee Members.

SECTION B - DEFINITIONS

1. Act or "the Act"
   The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), as amended, 33 USC 1251, et. seq.
2. DWR or "the Division"
   The Division of Water Resources, Water Quality Programs, Department of Environmental Quality.
3. EMC
   The North Carolina Environmental Management Commission.
4. EPA
   The United States Environmental Protection Agency.
5. Permit Issuing Authority
   The Director of the Division of Water Resources.

SECTION C - GENERAL CONDITIONS

1. Duty to Comply
   The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

   a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

   b. The CWA provides that any person who violates section[s] 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $37,500 per day for each violation. [33 USC 1319(d) and 40 CFR 122.41(a)(2)]

   c. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [33 USC 1319(c)(1) and 40 CFR 122.41(a)(2)]

   d. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. [33 USC 1319(c)(2) and 40 CFR 122.41(a)(2)]

   e. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. [40 CFR 122.41(a)(2)]

   f. Under state law, a civil penalty of not more than $25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]

   g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500. Penalties for Class II violations are not to exceed $16,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $177,500. [33 USC 1319(g)(2) and 40 CFR 122.41(a)(3)]

2. Duty to Mitigate
The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41(d)].

3. Civil and Criminal Liability
Except as provided in permit conditions on "Bypassing" (Part II.C.4), "Upsets" (Part II.C.5) and "Power Failures" (Part II.C.7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USG 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

5. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41(g)].

6. Onshore or Offshore Construction
This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability
The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information
The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41(h)].

9. Duty to Reapply
If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41(b)].

10. Expiration of Permit
The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.) [40 CFR 122.21(d)] Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements
All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41(k)].

a. All permit applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures .

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above;

(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]

d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:

"*I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*"

12. Permit Actions
This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41(f)].

13. Permit Modification, Revocation and Reissuance, or Termination
The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 02H .0100; and North Carolina General Statute 143.215.1 et. al.

14. Annual Administering and Compliance Monitoring Fee Requirements
The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 02H .0105(b)(2) may cause this Division to initiate action to revoke the permit.

SECTION D - MONITORING AND RECORDS

1. Representative Sampling
Samples collected and measurements taken, as required herein, shall be representative of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is representative of the discharge for the period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41(j)].

2. Reporting
Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 1.1, 2, 3) or alternative forms approved by the Director, postmarked no later than the last calendar day of the month following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

3. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures

Laboratories used for sample analysis must be certified by the Division. Permittees should contact the Division's Laboratory Certification Section (919 733-3908 or https://deq.nc.gov/about/divisions/water-resources) for information regarding laboratory certifications.

Facilities whose personnel are conducting testing of field-certified parameters only must hold the appropriate field parameter laboratory certifications.

Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the CWA (as amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention

Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:

- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation
- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

8. Inspection and Entry
The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

   a. Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
   d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location [40 CFR 122.41(i)].

SECTION E - REPORTING REQUIREMENTS

l. Change in Discharge
All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes
The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41(l)]. Notice is required only when:

   a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29(b); or
   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1); or
   c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance
The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41(l)(2)].

4. Transfers
This permit is not transferable to any person without prior written notice to and approval from the Director in accordance with 40 CFR 122.61. The Director may condition approval in accordance with NCGS 143-215.1, in particular NCGS 143-215.1(b)(4)b.2., and may require modification or revocation and reissuance of the permit, or a minor modification, to identify the new permittee and incorporate such other requirements as may be necessary under the CWA [40 CFR 122.41(l)(3), 122.61] or state statute.

5. Monitoring Reports
Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41(l)(4)].

   a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II.D.2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.

b. If the Permittee monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 and at a sampling location specified in this permit or other appropriate instrument governing the discharge, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting
   a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41(l)(6)].
   b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.
   c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.
7. Other Noncompliance
   The Permittee shall report all instances of noncompliance not reported under Part II.E.5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.E.6. of this permit [40 CFR 122.41(l)(7)].
8. Other Information
   Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41(l)(8)].
9. Noncompliance Notification
   The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:
   a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
   b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
   c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass without treatment of all or any portion of the influent to such station or facility.

   Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence. Also see reporting requirements for municipalities in Part IV.C.2.c. of this permit.
10. Availability of Reports
    Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1(b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports
The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

12. Annual Performance Reports
Permittees who own or operate facilities that collect or treat municipal or domestic waste shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

The report shall be sent to:

NC DEQ / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

PART III
OTHER REQUIREMENTS

SECTION A - CONSTRUCTION

a. The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless (1) the Division has issued an Authorization to Construct (AtC) permit or (2) the Permittee is exempted from such AtC permit requirements under Item b. of this Section.

b. In accordance with NCGS 143-215.1(a5) [SL 2011-394], no permit shall be required to enter into a contract for the construction, installation, or alteration of any treatment work or disposal system or to construct, install, or alter any treatment works or disposal system within the State when the system's or work's principle function is to conduct, treat, equalize, neutralize, stabilize, recycle, or dispose of industrial waste or sewage from an industrial facility and the discharge of the industrial waste or sewage is authorized under a permit issued for the discharge of the industrial waste or sewage into the waters of the State. Notwithstanding the above, the permit issued for the discharge may be modified if required by federal regulation.

c. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

- END OF PARTS II & III -

Fact Sheet - NPDES Permit

Tar-Pamlico Basin Association

NPDES No. NCC000002

Final Permit

December 16, 2020

PERMIT ACTION

By its letter of June 29, 2019, the Tar-Pamlico Basin Association and its member facilities applied for renewal of the subject NPDES permit governing the group's collective discharge of Total Nitrogen and Total Phosphorus to the Tar-Pamlico River and estuary.

The Division made a tentative determination to renew the Association's group permit and published public notice of this determination in the principle newspaper for each county in the river basin, the last being published on November 4, 2020. The only comments received were those of the Permittee. The Division made a final determination to reissue the permit as proposed. Its response to comments received is presented at the end of this Fact Sheet.

INTRODUCTION

Nutrient Controls.

In December 1989, responding to the estuary's nutrient problems, the NC Environmental Management Commission (EMC) designated the Tar-Pamlico River basin as Nutrient Sensitive Waters (NSW), requiring a basin-wide nutrient strategy. The first phase of the strategy largely targeted wastewater treatment plants and other point sources. Of these, a coalition of 16 dischargers known as the Tar-Pamlico Basin Association (TPBA) accounted for 93% of the permitted flows in the basin. The Phase I (1990-1994) Agreement among the Division, the TPBA, and other parties, included a nutrient 'trading' program between point and nonpoint sources that served as a nationwide model of innovation.

Modeling of the estuary was completed in 1993, and the results documented in the December 1994 Tar-Pamlico River Basinwide Water Quality Management Plan. Nutrient reduction targets required that Total Nitrogen (TN) loads to the estuary (1991 baseline) be reduced by 30 percent and that Total Phosphorus (TP) loads be held at baseline levels. The reduction targets were used to calculate group caps for nitrogen and phosphorus for point sources in the basin. The Division provided the Basinwide Plan to the U.S. EPA, and the EPA approved the document as a Nutrient TMDL in 1995.

The nutrient control strategy has been revised and updated periodically since the first Agreement (Phase I) was established in 1989. The most recent Agreement (Phase IV) was approved by the Environmental Management Commission on July 9, 2015, and expires December 31, 2024.

Portions of the estuary remain on the 303(d) list based on exceedance of the 40 µg/L chlorophyll a criterion.

Nutrient Limits for Point Sources.

The Agreement was long the mechanism by which the group caps on point source nutrient discharges were governed. In the 2009 permit cycle, the EPA expressed concern that the Agreement did not provide enforceable nutrient limits and accountability among the Association members. The Division worked with the TPBA to divide the group caps among the members. In the 2014 renewal, it added nutrient limits to the members' individual NPDES permits based on the

members' individual TN and TP allocations. The permits included a compliance date of January 1, 2016 for the nutrient limits.

The Association applied for and obtained a group permit to govern total nitrogen and total phosphorus in a collective fashion. The group permit became effective on January 1, 2016. Group limits in the permit replace those in the members' individual permits so long as the Association as a whole meets its group limits. In this way, the permit preserves the group compliance approach that has been the hallmark of the nutrient strategy since it was first developed. The permit also includes individual limits for each member that become effective under certain circumstances to address the EPA's enforcement concerns.

PERMIT OVERVIEW

Co-Permittees

The Tar-Pamlico Basin Association ("TPBA," or the "Association") is a not-for-profit corporation established in North Carolina. The Association provides a framework in which its members can work collectively to meet point source nutrient targets in the basin.

The Association's members are municipal wastewater utilities. All members discharge under existing individual NPDES permits. In 2015, the City of Creedmoor was accepted as a member in anticipation of its establishing a new discharge in the Tar-Pamlico basin. The City later decided not to pursue that option. The TPBA modified its by-laws to require its members to be NPDES permit-holders. As a result, the City no longer qualified and is no longer a member of the Association.

Scope of the Permit

The Association and its members are co-permittees under the group permit. In general, the Association serves as the contact between the Division and the co-permittee members in matters pertaining to this permit.

The group permit governs the collective discharge of Total Nitrogen and Total Phosphorus from the co-permittees to the estuary consistent with the Agreement and the approved nutrient TMDL. Requirements in this permit supplement those in the co-permittee members' individual NPDES permits but do not replace those requirements except where specifically stated.

Each member's individual NPDES permit remains in effect and continues to govern the other parameters of concern for that discharge.

PROPOSED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The group permit includes effluent limitations for TN and TP, monitoring and reporting requirements, and other special conditions to complement those already found in the members' individual permits. The nutrient conditions in all of the permits are designed to implement the approved Nutrient TMDL and the Phase IV Agreement.

Effluent Limitations

Group and Individual TN Limitations

Appendix A of the permit contains (1) the roster of Co-Permittee Members in the Association, (2) the TN and TP allocations/ limits for each member, and (3) the TN and TP allocations/ limits for the Association as a whole. The nutrient allocations are expressed both in metric units, as they have been in the Agreements, and in English units. The group's nutrient limits are expressed in English units.

All allocations/limits are annual mass limits and apply to a calendar year period.

The group caps will remain in effect and be fully enforceable at all times. So long as the Association does not exceed its TN or TP cap in a given calendar year, the members are deemed to be in compliance with their individual limits for that nutrient. If the Association exceeds either group cap, the members' individual limits for that nutrient will become effective and those members that contributed to the exceedance are subject to enforcement for their individual exceedances. In the event of a group exceedance, the Association and its members are also required to purchase nutrient offset credits to mitigate the impact of the excess nutrient load to the estuary.

Changes in Membership or TN Allocations

The TN and TP allocations of the co-permittee members can change as the result of purchases, sales, trades, leases, and other transactions. Any such changes would result in similar changes in the Association's group allocations. Changes in membership also affect the Association's allocations due to the addition or subtraction of the member's allocation from the group total.

Whenever changes in the allocations or the membership occur, Appendix A of the permit must be modified in order to formally incorporate those changes and adjust the enforceable limits in the permit.

The TN and TP allocations/ limits are expressed as calendar year values; therefore, any adjustments can become effective only at the beginning of the calendar year (January 1) following the transaction or membership change. The Association will notify the Division each year of proposed changes in Appendix A (see Reporting Requirements, below).

Initial Co-Permittee Members

The Association currently includes the following co-permittee members and facilities:

	Permit	Co-Permittee Member	Facility
1.	NC0026492	Belhaven, Town of	Belhaven WWTP
2.	NC0042269	Bunn, Town of	Bunn WWTP
3.	NC0025402	Enfield, Town of	Enfield WWTP
4.	NC0069311	Franklin County	Franklin County WWTP
5.	NC0023931	Greenville Utilities Commission	GUC WWTP
6.	NC0020231	Louisburg, Town of	Louisburg WWTP
7.	NC0025054	Oxford, City of	Oxford WWTP
8.	NC0020435	Pinetops, Town of	Pinetops WWTP
9.	NC0026042	Robersonville, Town of	Robersonville WWTP
10.	NC0030317	Rocky Mount, City of	Tar River Regional WWTP
11.	NC0023337	Scotland Neck, Town of	Scotland Neck WWTP
12.	NC0020061	Spring Hope, Town of	Spring Hope WWTP
13.	NC0020605	Tarboro, Town of	Tarboro WWTP
14.	NC0020834	Warrenton, Town of	Warrenton WWTP
15.	NC0020648	Washington, City of	Washington WWTP

The nutrient allocations/ limits for each member are included in Appendix A of the permit. Future versions of the table will also identify any changes in the individual or group allocations as the result of approved changes.

Monitoring Requirements

All members of the Association are required under their individual NPDES permits to monitor TN and TP on a regular basis and report the results in their Discharge Monitoring Reports (DMRs). The group compliance permit does not duplicate these monitoring requirements nor require additional nutrient monitoring. The Association will continue to compile the monitoring results of its members and report its annual loads to the Division on an annual basis.

Instream monitoring is not required under this permit. However, the Association is also a monitoring coalition and, by separate agreement with the Division, conducts instream monitoring of nutrients and other parameters of concern.

Reporting Requirements

Each member continued to report its nutrient monitoring results on its individual DMRs. The Association is not required to duplicate these detailed reports.

The Association submits year-end, annual projection, and 5-year reports on its activities to the Division. The year-end report (due March 31 of each year) includes an accounting of the Association's and its members' TN discharges for the previous calendar year for compliance purposes. It also includes a list of transactions, if any, completed during that period and affecting TN or TP allocations, an assessment of progress made, and planned activities for the coming year. The annual projections report (due July 1 after any year in which the Association exceeded 85% of its TN or TP limit) estimates future loadings, identifies needed improvements in its members' nutrient controls, and proposes a timeline for improvements. If necessary, the Association will purchase offset credits to prevent any limits exceedance, document those credits in the report, and request modification of its permit to incorporate the offsets in its allocations/ limits. The 5-year report (due July 1, 2020, that is, with its application for renewal) is intended to ensure that the Division and the Association agree on the group and individual allocations at the end of the permit term.

Compliance

If, despite its annual projections and purchase of offset credits, the Association exceeds its TN or TP limit in any calendar year, it is required to make offset payments to the NC Agricultural Cost-Share Program for the exceedance(s). These offsets notwithstanding, the Division may then take appropriate enforcement action against the Association or its co-permittee members or both as it considers necessary and appropriate to address the exceedance.

In the event that the group exceeds one or both nutrient limits, the members' individual nutrient limits for the affected nutrient(s) become effective, and the Division may also initiate enforcement actions against those members that exceed their individual limits.

OTHER SPECIAL CONDITIONS

Calculation of Mass Loads. The permit includes a special condition describing how Total Nitrogen and Total Phosphorus mass loads are to be calculated. This mirrors the condition in the members' individual permits.

RESERVE NUTRIENT ALLOCATIONS

The original TN and TP allocations/group caps for the Association were established in the Tar-Pamlico Nutrient TMDL and the Tar-Pamlico Nutrient Sensitive Waters Agreement among the Association, the Division, and other parties. When National Spinning (a significant industrial discharger to the estuary and an early member of the Association) closed its Washington, NC

facility in 2004, its nutrient loads (~27,000 kg/yr (59,500 lbs/yr) TN and ~1,800 kg/yr (3,970 lbs./yr) TP) were subtracted from the overall Association nutrient allocations and group caps. The Association's remaining allocations/ caps are still "active" and are the bases for the nutrient limits in the Association's group permit. The subtracted portions are now held in "reserve".

Appendix A of the 2015 permit listed the City of Creedmoor as a co-permittee member and mentioned in a footnote that some of the now-unassigned allocations would be made available for a new treatment facility the City planned to build. The footnote was the permit's only reference to the unassigned allocations.

The City later dropped its plans for the facility. In this 2020 permit, the City has been removed from the roster in Appendix A, as has the associated footnote.

Despite the loss of this reference, the Division continues to recognize the unassigned allocations as a portion of the point source Wasteload Allocations for TN and TP and considers them to be available for use by new dischargers, provided that their use is consistent with the Tar-Pamlico Nutrient TMDL, the Phase IV Nutrient Sensitive Waters Agreement, and other applicable permitting and nutrient control requirements. When the need arises, the Division and the TPBA will determine the amount of allocation to be made available and set the terms and conditions of their use. (Preliminary discussions began in 2019, when a new discharger expressed an interest in joining the Association, but those discussions have proceeded no further.)

PUBLIC REVIEW

The attached Response to Comments presents a summary of the public review process, the comments received, and the Division's responses.

- End of Fact Sheet -

RESPONSE TO COMMENTS

Tar-Pamlico Basin Association

NPDES No. NCC000002

December 16, 2020

The Tar-Pamlico Basin Association and its member dischargers applied on June 29,2020, for renewal of its group NPDES permit. The permit supplements the Association members' individual NPDES permits and governs their collective discharge of Total Nitrogen and Total Phosphorus to surface waters draining to the Tar-Pamlico River estuary. The Division made a tentative determination to issue the permit. Public notices were posted on the Division's web site and published once in each of the following newspapers with circulation in the Tar-Pamlico basin. Comments were accepted through December 7, 2020.

Newspaper	County	Date
Online – DEQ website[1]	(Statewide)	10/30/2020
Rocky Mount Telegram	Edgecombe	10/30/2020
Daily Reflector (Greenville)	Pitt	10/30/2020
The Washington Daily News	Beaufort	10/31/2020
The Coastland Times (Manteo)	Dare	11/1/2020
Warren Records (Warrenton)	Warren	11/4/2020
Franklin Times (Louisburg)	Franklin	11/5/2020
Oxford Public Ledger	Granville	11/5/2020

The Division also provided a copy of the draft permit to the U.S. EPA Region 4's NPDES Permitting Section for review.

The Division received two responses during the comment period, from the Permittee and from the Division's Raleigh Regional Office staff. The comments and the Division's responses are presented below.

Status of Unassigned Nutrient Allocations

Comment: The Association expressed concern that the draft permit no longer included a reference to the TN and TP allocations originally associated with the National Spinning facility in Washington, NC (now closed). Appendix A of the 2015 permit noted that the allocations would be made available to a new treatment facility being proposed by the City of Creedmoor. Because the City did not pursue its plans for the facility, it became ineligible for membership in the Association and has been removed from the list of members in Appendix A, along with the reference to the unassigned allocations. The Association asked that either the permit or fact sheet be revised to note the continued existence of the allocations in case they are needed by another new discharger in the future.

[1] https://deq.nc.gov/news/events/notice-intent-issue-npdes-wastewater-permit-ncc000002-tar-pamlico-basin-association

Response: Despite having removed the reference to the unassigned allocations from the permit, the Division still considers them to be a portion of the point sources' Wasteload Allocations and available for use by new dischargers in the future, provided that their use is consistent with the Tar-Pamlico Nutrient TMDL, the Phase IV Nutrient Sensitive Waters Agreement, and other applicable permitting and nutrient control requirements. When the need arises, the Division and the TPBA will determine the amount of allocation to be made available and the terms and conditions of their use by the new discharger. In the meantime, the allocations will be held in reserve.

Action Taken: The Division has added a "Reserve Nutrient Allocations" section to the fact sheet that clarifies the status of the unassigned allocations and summarizes its position on their future use.

Reporting Date

Comment: The RRO staff noted that Condition A.(5.)(e.) of the draft permit still lists a due date of July 1, 2020 for the Association's 5-Year Report, and it should be updated.

Response: Agreed.

Action Taken: The due date has been corrected to July 1, 2025.

- End of Response to Comments -

Appendix C – Phase IV Agreement

Tar-Pamlico
Nutrient Sensitive Waters
Implementation Strategy: Phase IV

July 2015

I. Summary

This document establishes the fourth phase of a nutrient control Agreement for point source discharges in the Tar-Pamlico River Basin, reaffirms loading goals established in Phase II for all sources in the basin. The Agreement was initiated in 1990 in response to nutrient-driven water quality impairments in the Pamlico River estuary, and specifically to address a mandate from the NC Environmental Management Commission to the Division of Water Resources to develop a nutrient reduction strategy. At its inception, the Agreement provided a cost-effective alternative to uniform technology-based nutrient concentration limits. It later added elements of a nutrient TMDL for the basin, including estuary loading goals and point and nonpoint source allocations. Phase I spanned five years from January 1990 through December 1994, Phase II covered another ten years through December 2004, and Phase III spanned an additional ten years through December 2014.

This fourth phase continues the structure established in Phase II and continued throughout Stage III with a few key updates described in this document. This structure includes overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from a baseline year of 1991 and no increase in loading of phosphorus from that baseline. An association of point source dischargers, the Tar-Pamlico Basin Association (Association), receives collective annual end-of-pipe nitrogen and phosphorus loading caps. In the event that either cap is exceeded, the Association will fund agricultural practices at a predetermined cost-effectiveness rate to offset those exceedances through the NC Agriculture Cost Share Program.

Phase IV spans an additional ten years through May 31, 2025, with plans to update the Agreement within two years to address several improvements. The Phase IV incorporates modifications negotiated during Phase III including updates to the Association membership and related nutrient caps, inclusion of individual load limits in each member's NPDES permits, and proposed actions over the next two years that will improve the nitrogen offset rate and establish a phosphorus offset rate. Parties to the Agreement include the NC Environmental Management Commission (Commission), the Association, the Division of Water Resources (Division), and the NC Department of Agriculture & Consumer Services Division of Soil and Water Conservation (DSWC), which would administer offset payments.

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II. Background

A. Phase I

On September 12, 1989, the Commission classified the Tar-Pamlico River Basin as Nutrient Sensitive Waters (NSW). Figure 1 is a map of the basin. On February 13, 1992, the Commission approved a revised NSW Implementation Strategy that established the framework for a nutrient reduction trading program between point and nonpoint sources of pollution. The Strategy also established certain conditions to be met by an association of dischargers in the basin known as the Tar-Pamlico Basin Association (the Association).

The February 13, 1992 NSW Strategy for the Tar-Pamlico River Basin represented the first phase of an attempt to establish and achieve a nutrient reduction goal to address eutrophic conditions in the estuary. Phase I covered the period 1990-1994. Parties to the Phase I agreement as approved by the Commission included the Division (then the Division of Environmental Management), the Tar Pamlico Basin Association, Environmental Defense (then the Environmental Defense Fund) and the Pamlico-Tar River Foundation (PTRF).

The Association agreed to meet specific conditions in order to avoid effluent limits for nutrients in their permits and to have the opportunity to reduce nutrient loading in the most cost-effective manner, including the option to fund agricultural best management practices (BMPs). These conditions included the development of an estuarine hydrodynamic computer model, engineering evaluations of wastewater treatment plants, annual monitoring reports on nutrient loading, and minimum payments for the administration and implementation of agricultural BMPs. The Association met all conditions established in Phase I.

The Phase I Agreement set collective, technology-based discharge loading limits for the Association in the form of an annually decreasing, combined nitrogen and phosphorus cap. During the 1990 to 1991 period, low cost operational changes were implemented at several facilities to reduce nitrogen loadings. The engineering evaluation of member facilities and implementation of the study's recommended nutrient removal improvements also yielded significant loading reductions. These changes, combined with installation of nutrient removal at several of the larger facilities, allowed the Association to reduce its nutrient loads and stay beneath its caps throughout Phase I.

B. Phase II

The Phase II Agreement spanned ten years from January 1995 through December 2004. Modeling of the Pamlico River estuary during Phase I provided a foundation for water quality-based loading goals for Phase II. Based on the estuary modeling, Phase II established overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from a baseline year of 1991 and no increase in loading of phosphorus from that baseline. Based on these goals, it also established nitrogen and phosphorus discharge loading caps for the Association. These caps also accounted for the load reductions achieved through operational changes implemented during the 1990/1991

period. The Association stayed beneath both caps throughout Phase II, steadily reducing its loading of both nutrients despite steady increases in flow. Overall, from 1990 through 2003, the Association decreased nitrogen loads to the river by approximately 45% and phosphorus loads by over 60%, while flows increased approximately 30%. Appendix A is a table of caps and loads for all years of the Agreement through 2003. The success of this collective cap approach may be attributed in part to the element of time it provided for individual facilities to implement nutrient removal as it became most cost-effective for them.

Phase II also established requirements for non-Association point source dischargers and called for rule-making to fully enact those requirements. That rulemaking became effective in April 1997. It required new and expanding dischargers over certain sizes to meet effluent concentration limits and to fully offset new or increased loads using the same offset approach developed for the Association. During Phase II, there were no new dischargers to the basin, and no existing dischargers became subject to the rule's requirements.

Phase II also established instream nutrient goals for nonpoint sources and called for a separate nonpoint source (NPS) strategy. That NPS strategy was put into effect in January 1996 as a voluntary effort that would work from existing programs, seeking additional funds and developing accounting tools. After two years of voluntary implementation, the EMC found progress insufficient and initiated nonpoint source rulemaking. Rules were fashioned after those recently adopted in the adjacent Neuse basin. They addressed riparian buffer protection, agriculture, urban stormwater, and fertilizer management. The rules became effective during 2000 and 2001, and continue to be fully implemented as of 2006.

C. Phase III

Phase III of this Agreement was approved by the EMC on April 15, 2005. It spanned an additional ten years through December 31, 2014. This third phase continued the structure established in Phase II including the overall performance goals for the nutrient strategy of 30 percent reduction in nitrogen loading from the baseline year of 1991 and no increase in loading of phosphorus from the baseline. The Phase III Agreement updated Association membership and related nutrient caps. It proposed action in the first two years to update the offset rate, resolve related temporal issues, and revisit alternative offset options. During this time parties to the Agreement met several times and came to agreement on issues related to banked credit and credit life that are reflected in Phase IV of the Agreement. Parties to the Agreement agreed to incorporate individual allocations and nutrient limits in individual NPDES permits, that would become applicable if the group load reductions were not achieved, and proposed actions to take in Phase IV of the Agreement to update the nitrogen offset rate and establish a phosphorus offset rate.

D. Summary of Updates for Phase IV

Since its inception, the Tar-Pamlico Agreement has been praised by the U.S. EPA and the Commission for its innovative and integrative approach to nutrient management. For many years, the EPA held it up as a model for others to use. Of course, nutrient control efforts have continued to evolve on a national scale. Considerable advances have been made and

experience gained in treatment technologies and strategic approaches to nutrient controls, and the EPA has established a considerable body of guidance materials to facilitate these efforts. Where appropriate, this agreement is being updated to reflect that knowledge.

Throughout Phase I, II, and III of this Agreement, nutrient discharges by the Tar-Pamlico point sources have been limited solely by the group caps found in the Agreement. By design, the Tar-Pamlico permits have not included facility specific nutrient limits, and the EPA Region 4 office had accepted that approach.

Based on guidance released by EPA's Office of Wastewater Management in 2007[1], EPA Region IV notified the Division during Phase III that Section 301(b)(1)(C) of the federal Clean Water Act and federal NPDES regulations (40 C.F.R. 122.44(d)(1)) require that NPDES permits include any limitations established in or based upon an approved TMDL. To comply with EPA's directive, the Division added the group caps for nitrogen and phosphorus in the members' permits as part of the 2009 renewals and agreed to add individual limits in the 2014 renewals. The Division has worked closely with the Association and the other parties to the Agreement to distribute the group's nitrogen and phosphorus allocations among the members in a fair and equitable manner.[2] The Division has also worked with the parties to develop a new NPDES group permit that effectively allows the Association to continue operating under the existing 'group caps' approach. The new permit will include both the group caps and the members' individual limits; but, so long as the Association meets the group caps, the members will not be subject to their individual limits. The individual limits for one nutrient or the other will only become effective if the Association exceeds the group cap for that nutrient. Similarly, the individual limits in the members' permits will only become effective if they leave the Association (see Section X). The Division expects to implement the group and individual limits in the 2014 permit cycle and has updated this Agreement accordingly. Individual limits are summarized in Table 3. Section IV (F) provides an overview of the group permit and explains how it relates to the members' individual permits.

In addition to incorporating individual limits into the permits, parties to the Agreement convened several times over the years during Phase III to address other modifications to be incorporated in Phase IV. During these negotiations, parties resolved or established action items for the following items which are discussed in more detail in the applicable sections of this document:

1. Added the City of Creedmoor to the Association membership and noted Creedmoor's request for allocation pending their application and DWR approval for an NPDES permit.

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[1] *Watershed-based National Pollutant Discharge Elimination System (NPDES)Permitting Technical Guidance.* U.S. Environmental Protection Agency, Office of Wastewater Management, Water Permits Division. EPA 833-B-07-004. August 2007. http://www.epa.gov/npdes/pubs/watershed_techguidance_entire.pdf

[2] Nutrient allocations are the maximum allowable contributions from a source or group of sources as established in the Tar-Pamlico TMDL. Allocations are an allowance and the basis for nutrient limits in the affected NPDES permits. Nutrient limits are the enforceable application of those allocations.

2. Resolved how banked credit accrued during Phases I, II, and III and how future banked credits will be handled under Phase IV of this Agreement.

3. Established a process for updating the N offset rate and establishing a P offset rate that will capture the actual costs of the nutrient reducing practices implemented.

4. Addressed various permit related issues including localized hotspots and appropriate enforcement actions for cap exceedances,

5. Made additional refinements including updates to the Annual loading tables, a new map, updated credit register, and table of load allocation / limits to be included in the group and individual permits.

III. Association Members

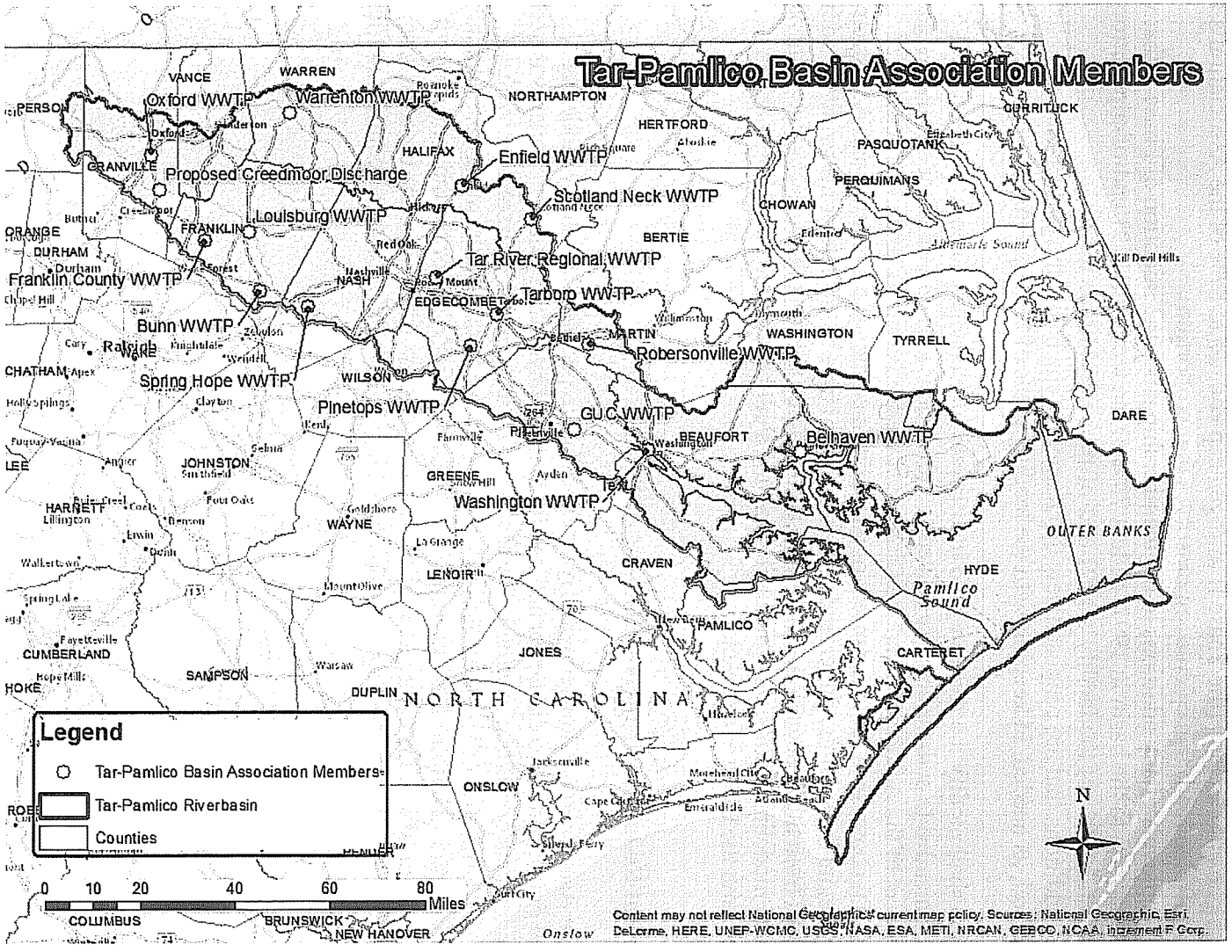
At the signing of this Agreement, the Tar-Pamlico Basin Association is comprised of the following members. Membership in Phase IV reflects one change from the final membership in Phase III with the addition of Creedmoor, which became a member of the Association in July 2012. Creedmoor was admitted to the Association upon a commitment to maintain specific nutrient concentration and mass limitations. However, as discussed with and agreed to by the parties to this Agreement, no additional load allocation will be added to the Association's Phase IV group caps until such time that the City of Creedmoor applies for and receives final DWR approval of on individual NPDES discharge permit.

Table 1. Current Membership of Tar-Pamlico Basin Association

1. Belhaven	8. Pinetops
2. Bunn	9. Robersonville
3. Enfield	10. Rocky Mount
4. Franklin Water & Sewer Authority	11. Scotland Neck
5. Greenville Utilities	12. Spring Hope
6. Louisburg	13. Tarboro
7. Oxford	14. Warrenton
	15. Washington
	16. Creedmoor

At a total permitted flow of 62.495 MGD, the Association now comprises 98.7% of permitted municipal and domestic flows in the Basin, as detailed in Appendix B.

Figure 1. Tar-Pamlico Basin Association Members



The Association may modify its membership at any time upon notification to the Division. At such time, the Division shall develop calculations to adjust the nitrogen and phosphorus caps using best available information on the nutrient loads produced by the facilities in question in 1991. The calculation method shall be the following:

(A) For additions that were discharging to the basin in 1991, add 70% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load.

(B) For removals of any of the 14 original members to the Phase II Agreement, deduct 87% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load (the Phase II nitrogen cap equates to 87% of the Association's 1991 end-of-pipe load; this calculation preserves that proportion).

(C) For removals of any additions to the membership since the initiation of Phase II that were discharging to the basin in 1991, deduct 70% of the facility's 1991 end-of-pipe nitrogen load and 100% of the facility's 1991 end-of-pipe phosphorus load.

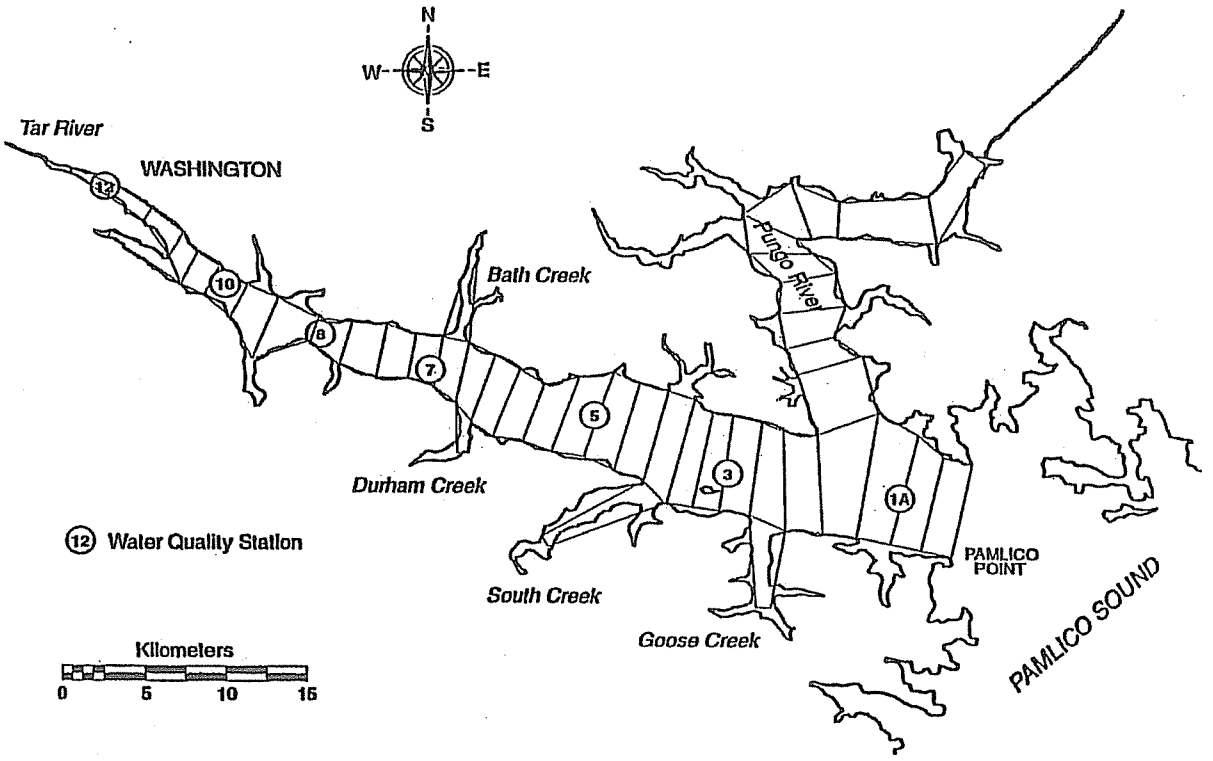
(D) For additions that are proposed new dischargers to the basin, the parties shall establish a method, as needed, in keeping with the loading goals of the Agreement.

The Division shall modify the Agreement to incorporate such changes. The Agreement shall be considered amended to address changes related to Subsections (A), (B), or (C) above upon signature of the President of the Association and the Director of the Division. Amendments related to Subsection (D) above shall require consent of all parties including the Commission. Adjusted caps shall apply beginning with the full calendar year nearest in time to the date of the facilities' addition to or removal from the Association. Should the parties agree to adjust the caps at some point based on additional modeling results, this calculation method shall be revisited accordingly and in accordance with the Clean Water Act.

IV. Nutrient Reduction Targets – History and Status

In 1992, the Association contracted with HydroQual, Inc. to perform the estuary modeling. HydroQual developed a two dimensional, laterally averaged hydrodynamic water quality model to predict the impacts of nutrient loading in the estuary. The model extends from Greenville to Pamlico Point a distance of approximately 60 miles. Figure 2 illustrates the model segmentation below Washington. The year 1991 was chosen as the calibration year for the model because it represented when typical impairment of the estuary was evident. It was also the baseline year established in the revised Phase I agreement for tracking nutrient reductions by requiring nutrient monitoring at the facilities.

Figure 2. HydroQual, Inc. Nutrient Model Segmentation below Washington, NC



A. Nutrient Assimilative Capacity Exceeded in the Pamlico Estuary

The Division applied the model under the 1991 calibration conditions as well as under various nutrient reduction scenarios and plotted the results for a site located near Washington in order to evaluate possible management strategies. The Washington site was chosen since modeling results indicated that this was where the greatest number of chlorophyll a and dissolved oxygen (DO) violations occurred, and the magnitude of the violations was the greatest. Thus, it is the critical portion of the river. Under the 1991 loading conditions, the model indicated that the chlorophyll a standard was violated approximately 18 percent of the time at Washington. These predictions are daily averages and are averaged across the river in each segment. Therefore, specific areas within a model segment or given times of day may indicate better or worse water quality than predicted.

Division staff reduced nutrient inputs by varying amounts during model applications to determine what loading reductions were needed to protect water quality standards. Model runs simulated a five-year period to allow improvements in the sediment concentrations to be reflected in water column quality. The results indicated that a 30 percent reduction in total nitrogen (TN) was predicted to significantly reduce the frequency and severity of algal blooms in the estuary. To prevent exceedances of the chlorophyll-a standard of 40 ug/l, the model predicted that a 45 percent reduction in total nitrogen may be needed (Figure 3). The model also predicted that nitrogen load reduction would significantly increase dissolved

oxygen in bottom water, prevent extended anoxic conditions and decrease the frequency of supersaturation conditions (Figure 4).

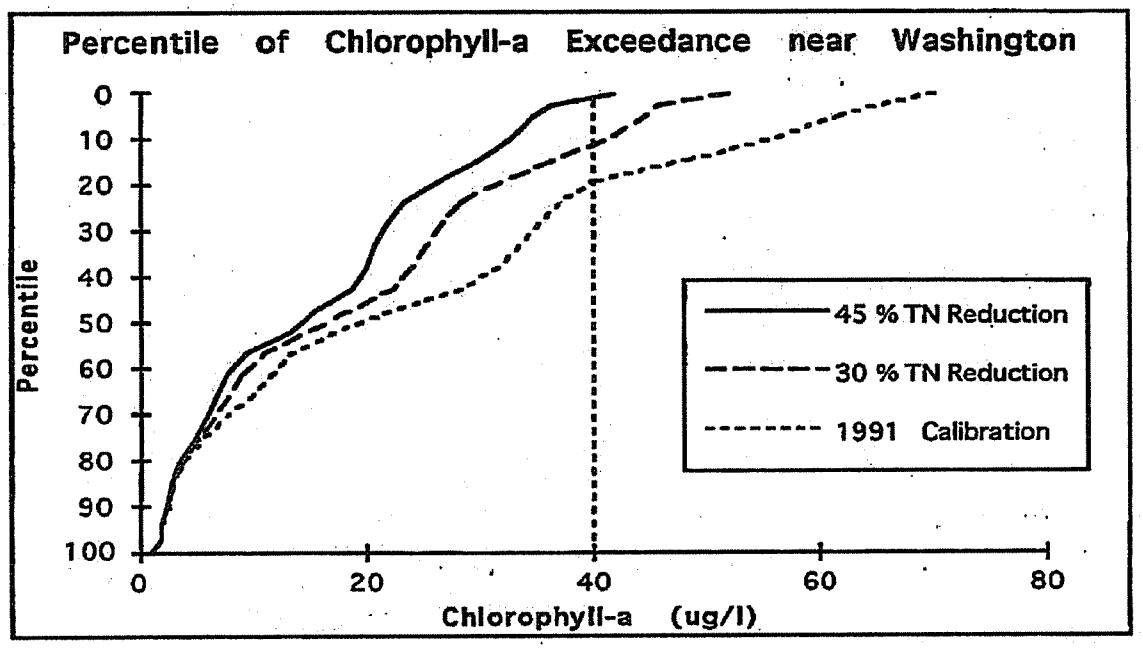
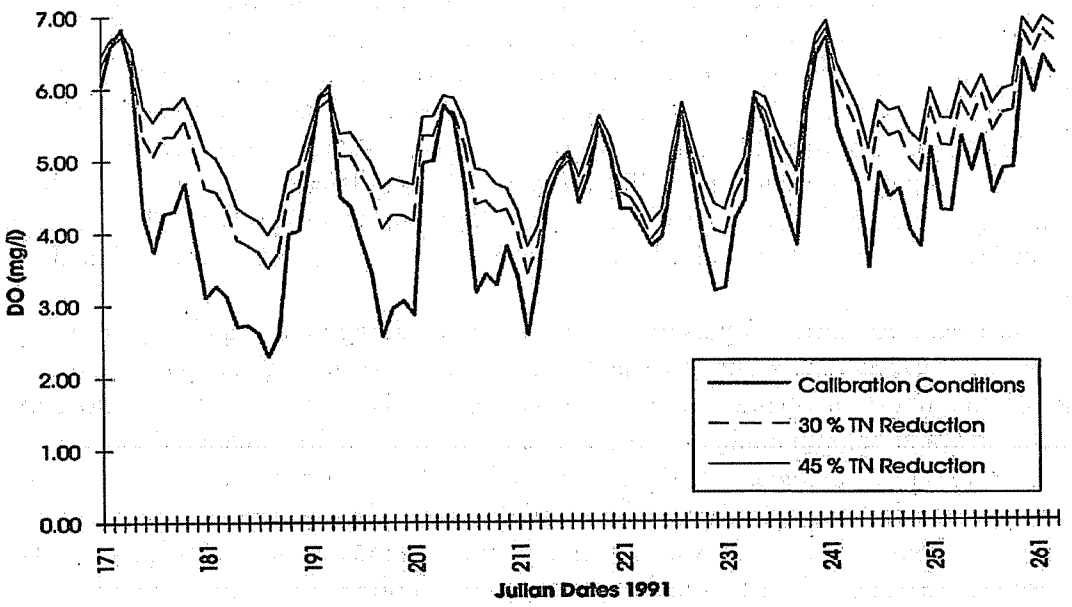


Figure 3. Predicted Percentiles of Chlorophyll-a Exceedances of the 40 ug/l Standard at Washington, NC, for Three Nitrogen Loading Scenarios Using HydroQual's Estuarine Model

Figure 4. Predicted Summer Bottom Layer Dissolved Oxygen at Station 3 for Three Nitrogen Loading Conditions



B. Estuary Nutrient Reduction Goals for Nitrogen and Phosphorus

The Phase II Agreement recognized the difficulty in projecting exactly what would be an acceptable level of water quality in the basin. Even if the basin were not developed, blooms would occur naturally at some frequency. In addition, a 45 percent reduction in nitrogen loading was considered potentially infeasible given the limitations of point and nonpoint source treatment technologies and BMP effectiveness. There was also some model error and uncertainty recognized in predictions, which could result in costly treatments that were not needed to meet water quality standards.

The model was calibrated under relatively high nutrient loading conditions in general. However, 1991 was a much dryer than average year; 1991 mean annual flow measured at the USGS Tarboro gauging station was 1,249 cfs, equating to 55% of the mean value for the entire period of record (1936 to present) and falling below the first quartile value. In wetter years, both nutrient loading and estuary response will differ from dry-year results. Therefore, the modeling results must be evaluated within the context of the model calibration.

Moreover, the further a given nutrient loading scenario applied to the model is from calibration conditions, the greater the uncertainty is for obtaining an accurate prediction of the water quality impacts of such loading. The interpretation of modeling results made by Division staff at the outset of Phase II was that algal and DO concentrations in the estuary would respond significantly to reductions in nitrogen loading and that a 45 percent TN reduction was needed to eliminate chlorophyll-a violations. However, the model could not be considered fully reliable for conditions so different from those existing at that time. To improve confidence in the modeling results, it was recommended that the model be recalibrated to reflect changing conditions as nutrient loading was reduced. Given the uncertainty inherent to a predictive model, an interim target was established , and the Phase II Agreement recommended that the model be recalibrated to lower nutrient loading conditions after reductions had been achieved in the basin.

The goal for TN reduction set in Phase II as an interim goal and maintained in Phase IV is 30 percent from 1991 conditions (relatively dry year). This level of TN reduction was selected because it resulted in most of the predicted change in chlorophyll-a and DO that was observed under TN reduction scenarios applied to the model. The Phase II Agreement forecast the need for further reductions beyond 30 percent, which it proposed to quantify by recalibrating the estuary model in the future under lowered nutrient loading conditions. It identified an ultimate goal of no water quality standard violations.

The estuary model supported that nitrogen was the most appropriate target nutrient to limit the potential for problematic algal blooms in the middle estuary. The model did not suggest significant improvements in chlorophyll-a levels would be seen in the middle estuary based on additional reductions in phosphorus. It is important, however, to consider the upper and lower bounds of the study area, where phosphorus is more likely to be limiting on a seasonal

basis. Phosphorus levels may become more important in the future after significant nitrogen reductions cause a commensurate shift in ratios of nitrogen to phosphorus. However, the proposed targets, if achieved, would result in TN:TP ratios within a desired range.

Another potential problem associated with elevated concentrations in either or both nutrients in this estuary is the loss of important submerged aquatic vegetation (SAV). While it is extremely difficult to model and predict recovery of SAV and their effect on nutrient dynamics, it would not be prudent to support additional increases in a phosphorus rich estuary. Therefore, Phase II recommended and this phase continues the goal of no increase in load of total phosphorus into the estuary from 1991 conditions.

Total Maximum Daily Load (TMDL) targets were set in Phase II for 2,777,821 lbs/yr of TN and 396,832 lbs/yr of TP at Greenville based on the relatively low flow year 1991. Recognizing that additional point and nonpoint source loadings occur below Greenville, the Phase II Agreement extrapolated loading estimates to Washington "based on yields using the average flow-to-drainage area ratio". This calculation estimated the 1991 TN load delivered to Washington as 4,285,781 lbs.. The associated 30% nitrogen reduction goal established in Phase II and continued here for all sources is 1,285,293 lbs/yr, making the loading goal for all sources at Washington 3,000,488 lbs/yr nitrogen and no increase in phosphorus loading relative to the 1991 baseline.

C. Annual Total Nitrogen and Total Phosphorus Loading Targets For Association Member Facilities

The Phase II Agreement established annual end-of-pipe nitrogen and phosphorus loading caps for the fourteen Association members. While the parties recognize that some assumptions and procedures involved in the nitrogen calculation could be refined, we agree that the net effect of such efforts relative to the strategy nitrogen goal renders these issues essentially moot. The Phase II nitrogen cap reasonably incorporates a 30% reduction for the Association, accounting for 1990 to 1991 load reduction efforts. A separate technical memorandum details the calculations that support this determination.

Subsequent to 1995, the initial Phase II nutrient caps were adjusted twice and the Agreement was modified accordingly. The caps were increased for the addition of Robersonville in 2001 and Scotland Neck in 2002 using the method described in Section III above.

For Phase IV, the parties agree to use the final Phase III end-of-pipe nitrogen cap of 889,403 lbs (404,274 kg) TN and the final phosphorus cap of 160,732 lbs (73,060 kg) TP. Should membership change during Phase IV the caps will be adjusted per the methods noted in Section III.

Table 2. End-of-Pipe Nutrient Loading Caps for Tar-Pamlico Basin Association

	Total Nitrogen (lbs/yr)	Total Phosphorus (lbs/yr)
Phase III Association Cap (15 members)	891,271 (404,274 kg/yr)	161,070 (73,060 kg/yr)
Phase IV Association Cap (16 members) [a]	891,271 (404,274 kg/yr)	161,070 (73,060 kg/yr)

[a]The City of Creedmoor has expressed interest in constructing a new treatment facility that would discharge up to 1.15 MGD of wastewater in the Tar-Pamlico basin. The City was accepted as a member in 2014 and is included here presuming it applies for and receives an NPDES discharge permit for the discharge. In March 2015 the City of Creedmoor entered into a service agreements with SGWASA that will result in their wastewater continuing to be treated by the facility. Should Creedmoor not apply for on NPDES permit no adjustment will be made to the cap. Final nutrient allocations/ limits will be determined in the course of any permitting process.

If loading exceeds either cap in any year of this Agreement, then the Association shall offset that exceedance by funding nonpoint source nutrient controls as described in Section V. Relaxation of these caps in future amendments to this Agreement would only be contemplated if monitoring and modeling results suggest all water quality standards and goals are being met and that assimilative capacity is available to the Association while maintaining a margin of safety, all consistent with the TMDL.

D. Addition of Creedmoor & Status of Former National Spinning Allocation

National Spinning was a member of the Tar-Pam Basin Association until the operation ceased discharging at the end of 2004. The Association membership was updated during Phase III and caps adjusted to reflect the removal of National Spinning. As a result 27,124 kg/yr (59,798 lb/yr) TN and 1,768 kg/yr (3,898 lb/yr) TP was removed from the caps per the calculation process described in the Section III.

Creedmoor's wastewaters are currently treated by the South Granville Water and Sewer Authority (SGWASA) which discharges in the Falls Lake Watershed. Creedmoor is exploring the possibility of building its own wastewater treatment facility in the future. In June 2010 the City of Creedmoor submitted a speculative discharge limit request to DWR for a possible 1.15 MGD BNR type wastewater treatment plant with a proposed discharge into the Tar-River. Creedmoor also applied to become a member of the Association and requested DWR reinstate a portion of the previously removed National Spinning Allocation to the Association's Cap. The Association has accepted Creedmoor as a member and the Division has indicated that a portion of the old National Spinning allocation would be made available should Creedmoor apply for and be approved for an individual NPDES permit. Final allocations / limits for the new discharge will be established once the City has satisfied any environmental review requirements for the project and submitted proper application for an NPDES permit for its discharge.

On March 28, 2015 the City of Creedmoor entered into a service agreement with SGWASA that will result in their wastewater continuing to be treated by that facility. Should

Creedmoor not apply for an NPDES permit no adjustments will be made to the cap in Table 2 of this Agreement and the National Spinning Allocation will remain retired.

E. Individual Allocations / Limits

Throughout Phase I, II, and III of this Agreement, nutrient discharges by the Tar-Pamlico point sources have been limited solely by the group caps found in the Agreement as referenced in the individual permits. By design, the Tar-Pamlico permits have not included facility specific nutrient limits, and the EPA Region 4 office had accepted that approach.

Based on guidance released by EPA's Office of Wastewater Management in 2007[3], EPA Region IV notified the Division that Section 301(b)(1)(C) of the federal Clean Water Act and federal NPDES regulations (40 C.F.R. 122.44(d)(1)) require that NPDES permits include any limitations established in or based upon an approved TMDL. The Division added the group caps for nitrogen and phosphorus in the members' permits as part of the 2009 renewals and agreed to add individual limits in 2014. The Division has worked closely with the Association and the other parties to the Agreement to determine appropriate nutrient allocations and limits for each member. The Division has also worked with the parties to develop a new NPDES group permit that effectively allows the Association to continue operating under the existing 'group caps' approach. The Division expects to implement the group and individual limits in the 2014 permit cycle and has updated this Agreement accordingly.

The group cap assigned to the Tar-Pamlico Basin Association is 891,271 lb/yr TN and 161,070 lb/yr TP as shown in Table 2. In order to apportion the group caps among individual member dischargers, the caps were divided in proportion to the maximum permitted flow in each member's permit as of 2014. Individual limits are summarized in Table 3 below provides an overview of the group permit and explains how it relates to the members' individual permits.

[3] *Watershed-based National Pollutant Discharge Elimination System (NPDES)Permitting Technical Guidance.* U.S. Environmental Protection Agency, Office of Wastewater Management, Water Permits Division. EPA 833-B-07-004. August 2007. http://www.epa.gov/npdes/pubs/watershed_techguidance_entire.pdf

F. Individual and Group Permit Requirements

As already noted, the Division added conditions to the members' NPDES permits in 2009 that established the TN and TP group caps as enforceable limits, subject to the terms and conditions of the Agreement. Beginning with the 2014 renewals, each member's permit will also include individual nutrient limits and related conditions. These changes in the permits are necessary to allow for appropriate enforcement in the event that group caps are exceeded.
The parties propose to use a supplemental NPDES permit to maintain the 'group compliance' approach that has been fundamental to previous Agreements. This permitting approach is designed to work as follows:

- Each member's individual NPDES permit will include its limits for TN and TP, as listed in Table 3, as well as monitoring requirements and other nutrient conditions. The group caps added to the member permits in 2009 will be moved to a group permit.

- A new group permit, issued to the Association and its members, will establish nutrient limits and associated reporting requirements. The permit will include both the group caps for the Association and the members' individual limits. The group caps are the sums of the members' individual limits and are subject to change, such as when members join or leave the Association.

- So long as a facility is a member of the Association, it will be deemed to be in compliance with the nutrient limits in its individual NPDES permit and subject to the nutrient requirements of the group permit. No other terms and conditions of its individual permit are affected by its coverage under the group permit.

- The Association members, as a group, are subject to the TN and TP caps established in the group NPDES permit. For each nutrient, so long as the Association complies with its group cap, all members are deemed to be in compliance with their individual limits in the group permit. If the Association exceeds the cap for one or both nutrients, the individual limits for the nutrients of concern become effective, and any members exceeding an individual limit are in violation of the group permit.

- The members' nutrient limits in the group permit are a reflection of the limits in their individual NPDES permits. Any change in a member's nutrient limits requires that the both the group and individual permits be modified and the change undergo public review. The group permit can then be modified to ensure that the limits in both permits agree.

All members will continue to monitor and report their nutrient discharges as specified in their individual permits, and the Association will continue to report its members' nutrient loadings.

Table 3. Individual Allocations / Limits for Tar-Pam Basin Association Members

Permit	Owner	Facility	TN Allocations (lbs/yr)[a]	TP Allocations (lbs/yr)[a]
Association Members				
NC0026492	Town of Belhaven	Belhaven WWTP	14,261	577
NC0042269	Town of Bunn	Bunn WWTP	4,278	773
NC0025402	Town of Enfield	Enfield WWTP	14,261	577
NC0069311	Franklin County	Franklin WWTP	42,754	7,732
NC0023931	Greenville Utilities Commission	GUC WWTP	249,576	45,103
NC0020231	Town of Louisburg	Louisburg WWTP	19,538	3,531
NC0025054	City of Oxford	Oxford WWTP	49,915	9,021
NC0020435	Town of Pinetops	Pinetops WWTP	4,278	773
NC0026042	Town of Robersonville	Robersonville WWTP	25,671	4,639
NC0030317	City of Rocky Mount	Tar River Regional WWTP	299,491	54,124
NC0023337	Town of Scotland Neck	Scotland Neck WWTP	9,626	1,740
NC0020061	Town of Spring Hope	Spring Hope WWTP	5,705	1,031
NC0020605	Town of Tarboro	Tarboro WWTP	71,307	12,887
NC0020834	Town of Warrenton	Warrenton WWTP	28,523	5,155
NC0020648	City of Washington	Washington WWTP	52,054	9,407
Total	**Allocation/ Limit (Group Cap)**	**lbs/yr**	**891,271**	**161,070**
Total	**Allocation/ Limit (Group Cap)**	**kg/yr**	**404,274**	**73,060**

[a] The total allocations / limits expressed as kg/yr are taken to be whole numbers. The total and individual expressed as lbs/yr are calculated values ; they are not whole numbers, but, for the purposes of this table, are shown to the nearest whole pound. The sum of the individual allocations may differ from the total value due to rounding.

G. Loading Targets for Nonpoint Sources

The stated goal of this Agreement is to reduce total nitrogen loading measured at Washington by 30 percent from 1991 loadings. As calculated in Phase II, this reduction from all sources amounts to 1,285,293 lbs/yr. Since the point source contributions in 1991 accounted for 8 percent of the total nitrogen loading, point source reductions also account for 8% of the reduction needed. Therefore, nonpoint source activities in the basin are assigned a reduction of approximately 1,182,470 lbs/yr at Washington (i.e., 1,285,293 X 92%) to achieve a 30 percent reduction from all sources. This goal was translated upstream to "the source" using the same 30 percent instream decay assumption used for point sources. The Phase II Agreement called for a nonpoint source strategy, which was approved by the Commission in December 1995 as a voluntary plan. It apportioned the nonpoint source reduction target among agriculture, urban, forestry, and wetlands categories based on export coefficient calculations. The Division subsequently reapportioned these allocations to the manageable nonpoint source categories of agriculture and urban.

In implementing nonpoint source management efforts during Phase II, the Division found that while instream nonpoint source loading goals were an important concept, functional application instead favored use of the N and P *percentage* reduction and maintenance targets in land-based accounting methods by nonpoint sources. Compliance with instream loading targets would have additionally required some combination of complex modeling with significant uncertainty of processes occurring between edge of management unit and the water column instream, and a significant amount of quantitative water quality monitoring to support that modeling. Given the scale of uncertainties that would be associated with such an effort and resource limitations, nonpoint source management has evolved using land-based accounting methods.

H. Loading Targets for Non-Association Facilities

The Phase II Agreement established recommendations for all non-Association dischargers: existing and expanding domestic and industrial wastewater dischargers and all new facilities to enter the basin.

Phase II Agreement recommendations for expanding and new non-Association dischargers were subsequently codified as rules 15A NCAC 2B .0229 and .0237, and became effective April 1, 1997. These rules are currently being readopted as part of legislatively mandated re-adoption of all rules. Division staff is evaluating the need to revise the requirements through that process. Currently under the rules, domestic and industrial dischargers expanding to 0.5 MGD or greater and all new dischargers are required by the rule to offset all new nutrient loads at 110 percent of the established offset rate. Payment for the life of the permit is required at issuance or renewal. The Division plans to revise the effluent limit concentrations provided in Rule 15A NCAC 2B .0229 through an ongoing rules re-adoption process which will be completed in 2016. Any new requirements adopted through the rules re-adoption process will be applied to non-Association facilities at that time.

The intent of these recommendations is to ensure that new or expanding non-Association dischargers in the basin do not result in increased nutrient loadings to the estuary. They also serve as an incentive for all facilities treating nutrient-bearing wastewaters to become Association members, in which case their impacts are regulated through this Agreement. When these requirements were first established (1995), the TN and TP concentration limits represented Best Available Technology for domestic systems reasonably well, and they were more stringent on average than the Association's limits. Since then, some Association facilities have expanded their treatment capacity and, with increased flows, the equivalent nutrient concentrations of the caps have been reduced. Members would need to treat to 4.7 mg/l TN and 0.84 mg/l TP on average, based on full permitted flow. In the same period, nitrogen treatment capabilities have improved considerably. The result is that not only are the 6&1 limits previously specified in the Agreement an out-of-date measure of BAT for domestic facilities but they are also considerably less stringent than the limits the Association members must meet under design flow conditions.

As part of the legislatively required re-adoption of all rules, in 2B .0229 the Division will propose to shift non-Association offsets from the ACSP to the Division of Mitigation Services (DMS), formerly the Ecosystem Enhancement Program, while leaving the Association cap exceedance offsets under the current ACSP model as discussion in Section V. Use of DMS for non-Association offsets is based on the in-perpetuity nature of non-Association loads increases and the conforming design of the DMS offset program, as opposed to the limited duration of reductions typically provided under the ACSP, which complement discrete cap exceedances that the Association may produce.

During Phase III, no expanding nor new dischargers were issued permits pursuant to these requirements. Appendix B provides tables of all dischargers sorted by permitted flow.

V. Nutrient Offset Program

The purpose of this agreement is to allow Association facilities to achieve the Division's nutrient reduction goals by funding other more cost-effective nutrient reduction measures than the cost of meeting effluent limits at the Association facilities. This alternative involves funding nonpoint source controls that achieve reductions in nutrient loading to the estuary at least equivalent to the magnitude of cap exceedances in a given year.

A. Offset Options

The Phase II Agreement established certain nonpoint source management options for Association funding to offset cap exceedances. The parties agree to continue providing the following options for Phase IV of the Agreement:

- Implementation of certain nutrient-reducing agricultural BMPs under the NC Agriculture Cost Share Program. Soil and Water shall administer offset funds for this purpose. Funds shall be allocated to operations within the Tar-Pamlico River Basin, and shall be targeted geographically and by practice for the most cost-effective nutrient reductions to the estuary practicable. Soil and Water shall track and report the

disposition of these funds to the Division annually. Soil and Water shall ensure and demonstrate that offset-funded BMPs are separate from and in addition to BMPs implemented to meet requirements of the Tar-Pamlico agriculture rule.

- Support for operation and maintenance of a continuous flow gauging station in the Tar River at Greenville or other mainstem location as close as practical to the estuary.

B. Offset Credits

1. **Flat Rate.** To date the Agreement has used a flat offset rate that was established for Phase II and will continue until updated in Phase IV at $13.15 of nitrogen in excess of the annual cap. This flat rate was based on a report by Research Triangle Institute entitled *Cost-Effectiveness of Agricultural BMPs for Nutrient Reduction in the Tar-Pamlico Basin* (January, 1995), which included a safety factor and an administrative cost factor. During Phase III parties to the Agreement discussed ways to update the nitrogen offset rate and establish a phosphorus offset rate in a manner that would utilize actual projected load reductions and costs, including uncertainty estimates and associated issues and cost factors as itemized below. During the first two years of Phase IV, the Division shall work in consultation with the parties to develop improvements to the offset rate that address the following issues:

    - Develop an offset rate for exceedances of the phosphorus cap.
    - Update cost-effectiveness data developed in the 1995 RTI report.
    - Add BMPs not addressed in the 1995 RTI report and quantifiable based on current research.
    - Factor uncertainty into cost-effectiveness estimates.
    - Project proportionate BMP implementation for the foreseeable future.
    - Explore the ability to establish single, weighted nitrogen and phosphorus cost-effectiveness values based on proportional use;
    - Seek to account for spatial distribution within the basin as well.
    - Revisit the administrative cost factor.

During Phase IV parties will develop an updated nitrogen offset rate and establish a phosphorus offset rate that captures the full actual costs of implementing agricultural BMPs under the NC Agriculture Cost Share Program. Parties to the Agreement will work together to develop costs for the following implementation elements to consider when updating offset rates, as applicable:

- Design, planning and engineering
- Recruitment and outreach by the soil & water conservation district staff
- Land costs
- Implementation and construction
- Operation and maintenance
- Inspection costs
- Regulatory costs for DWR and DSWC technical assistance and administration

Once established, the Phase IV nitrogen and phosphorus offset rates shall be revisited at least once every five years to consider new information and incorporate future updates. To replace the current offset rate with the results of this effort, the Division shall present any modifications to the Agreement to the Commission for approval by January 1, 2017 or as soon as practicable thereafter.

2. **Banked Credit Life.** Over the course of Phase I, II, and III the Association made payments towards various creditable measures and activities. A summary of these payments and credits is provided in Appendix C. These banked credits fall into two distinct categories. The first being credits earned for funding nutrient reducing BMPs. The second category is more administrative in nature in the form of credits earned for funding a flow gauge and coordinator position. During the course of Phase III, the Division worked with the parties to resolve questions related to the longevity of these banked credits and the rate at which banked credits can be redeemed. The parties have resolved these questions for existing banked credits and established guidance on the disposition of future payments for banked credit. Parties agree that in the future up to 10% of a load exceedance can be offset with the banked credit earned by funding the gauge and coordinator in a given calendar year while the banked credit balance from funding nutrient BMPs can be used in any amount as an offset. Furthermore, banked credit that was earned by funding Agriculture Cost Share BMPs shall expire at such time the BMP contract for the funded BMP expires under the Agriculture Cost Share Program. This is based on the premise that continued operation, maintenance and continued nutrient reduction performance can no longer be assured for the BMP once the contract expires.

3. **Banked Credit History & Status**

   The section below details the credits earned during each Phase of the Agreement. Details of payments and credits during each phase of the Agreement are provided in the credit register located in Appendix C.

   - **Phase I Credits:** During the first phase of this Agreement (1990-1994) the Association funded a series of agriculture BMPs through a combination of Association funds and federal grants. Phase I credit history is captured in the credit register in Appendix C. As of 2015 the remaining credit balance is 4,923 lbs of N.

   - **Phase II Credits:** The Association did not exceed its caps during Phase II, but did make payments to fund the flow gauge and partially fund the DSWC staff position. With these payments, the Association banked credit toward future cap exceedances at the $13.15/lb rate. As tabulated in Appendix C, the Association accumulated $399,193 in advance offset payments for 30,356 lbs N reduction credit.

- **Phase III Credits:** As in Phase II, the Association did not exceed its caps during Phase III, but continued to provide partial funding for the coordinator position until it was eliminated in 2006. The Association also continued to fund the flow gage at Greenville. With these payments the Association banked credit toward future cap exceedances at the $13.15/lb rate. As tabulated in Appendix C, the Association accumulated an additional $220,267 in advance offset payments for an additional 16,712 lb N reduction credit for a total of 47,857 lbs of N reduction credits (Phase II + Phase III).

- **Phase IV Credits:** The Association may continue to earn banked credit for funding the Greenville flow gauge, which will be handled similar to past credit earned in this manner in that these credits are eligible to be used towards offsetting up to 10% of a load exceedance in a given calendar year

4. **Payment Schedule.** Under this Agreement, the Association shall develop annual loading projections to predict anticipated loading cap exceedances. If the Association exceeds 85% of its TN or TP limitation in any calendar year, the Association shall, no later than July 1 of the following year, evaluate the effectiveness of its members' nutrient controls, identify improvements sufficient to ensure continued compliance with the nutrient limits, and submit to the Division a report of its findings, proposed treatment improvements and related actions, and a timeline for implementing the proposed measures. At such time as the Association determines it expects to exceed either nutrient cap in the upcoming calendar year, and no banked credits reamain, it shall make the appropriate offset payment in advance of the cap exceedance and no later than July 1 of the year prior to the predicted cap exceedance. Also by that date, the Association shall request modification of the group NPDES permit in order to increase the group limit accordingly prior to the predicted exceedance.

   Advance payment of the nutrient offset payment will allow time for the offset measure to be implemented and the allocations and limits in the group permit to be adjusted to reflect the onetime offset payment in anticipation of the exceedance. Any offset payments made in July will be re-evaluated when the annual report is submitted in March of the following year. Any excess offset payments will be credited as a banked nutrient offset credit and be available for future use.

5. **Funding Sources.** If the dischargers can secure additional funding from sources such as federal grants, exclusive of funds available to the states, these funds can be used to make nutrient reduction payments or to fulfill other conditions to this agreement described below. Any additional funds that the dischargers secure for nonpoint source controls must be in addition to that which would have occurred from federal, state, and local sources if not for the existence of this agreement.

VI. Minimum Conditions to this Agreement

The parties agree to meet the following minimum conditions:

A. Monitoring

Association facilities shall continue to monitor effluent TP and TN and the Association shall submit an annual report to the Division every March 1 detailing this monitoring data from the previous year. The annual report will be used to determine compliance with this strategy. The Division may authorize less frequent monitoring (i.e., other than weekly) where the discharger demonstrates that less frequent sampling is adequate to characterize facility loadings. All facilities shall abide by monitoring protocols defined or referenced in their NPDES permits.

Where a facility fails to report flow data, its flow for the unreported period shall be estimated based on the ratio of the facility's reported flow in the remainder of the year to the combined flow of the other Association POTW members during the same time period. Where a facility fails to report TP or TN concentrations, the facility's nutrient concentrations for the unreported period shall be estimated by the Division using the best available data.

Although not a requirement under this Agreement, during Phase III the Association took the additional step of forming a Monitoring Coalition in March 2007. The Association currently collects monthly samples at 37 stations throughout the basin. The water quality data collected by the Association is submitted to DWR within 90 days of the end of the month in which the sampling was performed. The Association annual report formally finalizes the water quality data.

The monitoring performed by the monitoring coalition under the Memorandum of Agreement (MOA) with DWR does not affect the effluent monitoring required here. Rather, under the MOA the TPBA members are exempted from instream monitoring as specified in their individual NPDES permits. The current monitoring MOA between the Association and DWR was effective March 1, 2012 and runs through February 28, 2017. Details of the monitoring plan can be found in the MOA document on DWR's website at http://portal.ncdenr.org/web/wq/ess/eco/coalition.

B. Evaluation of Progress

To evaluate progress towards the strategy reduction goal, the Division conducted estuary use support assessment and nutrient loading trend evaluation for the 2014 Tar-Pamlico Basinwide Plan. Results of this evaluation indicate the estuary nutrient reduction goals have not been met at this time. The Division will continue to conduct estuary use support assessment and loading trend analysis as part of future basin plans. A summary of the most recent use support assessment and trend analysis methods and results is provided in the 2014 Basinwide Plan. An electronic copy of the plan can be found on the Division website at http://portal.ncdenr.org/web/wq/ps/bpu.

The Division is currently conducting a rules re-adoption process where it will seek to strengthen elements of the existing nutrient management strategy rules. In addition, the 2014 basinwide plan includes other recommendations the Division intends to pursue that include addressing research needs and gaps in the current management strategy. This ongoing work will provide information that can be used towards improving the implementation of nutrient reduction activities beyond the current proposed rule revisions, which will assist in achieving the nutrient strategy reduction goals.

VII. Local Water Quality Impacts

This Agreement does not preclude the Division from requiring additional nutrient controls by individual point sources where a localized water quality problem exists. If the Division determines that a member's TN or TP discharge has reasonable potential to cause localized water quality impacts, it may determine and assign an individual water quality-based limit for TN, TP, or both, as appropriate, for the Member in accordance with applicable NPDES rules. The Division will then propose to incorporate the new limit(s) into the Member's individual NPDES permit and this group permit according to standard permitting procedures. Once an individual WQBEL becomes effective in the group permit, the Member is subject to that limit in lieu of the Association TN or TP Limit. The Division shall provide copies of any proposed WQBEL so that parties to the Agreement may provide timely comments on the proposed agency action.

VIII. Decision-Making Authority

The Division shall have final decision-making authority with regard to the adequacy of nutrient offsets and allocations. The Soil and Water Conservation Commission shall have final decision-making authority with regard to agricultural BMP implementation. All other designated nonpoint source management agencies shall retain their responsibilities within the basin. This provision does not affect any appeal rights of the signatory parties with regard to such decisions.

IX. Nonpoint Source Controls

The Phase II Agreement called for a nonpoint source strategy, which was approved by the Commission in December 1995 as a voluntary plan. The Commission then received two annual reports on the progress of implementation under this voluntary plan before it that progress was insufficient and initiated rulemaking for nonpoint sources. Modeled after rules implemented in the adjacent Neuse River Basin in 1998, a set of rules addressing four subject areas went into effect during 2000 and 2001:

1. Agriculture
2. Urban stormwater
3. Riparian buffer protection
4. Fertilizer management

The agricultural community was required to achieve a collective 30% reduction in nitrogen losses within 5 years, and to ensure no increase in phosphorus losses within four years of the development of a phosphorus accounting method. Under the stormwater rule, 5 counties and 6 municipalities

were required to regulate new development to achieve 30% reduction in nitrogen export and no increase in phosphorus export from basinwide average pre-development conditions. These local governments were also required to identify and eliminate illicit discharges to the stormwater system, conduct education programs, and identify retrofit sites on existing developed lands. The riparian buffer rule established protections for existing riparian areas 50 feet in width basinwide, and required establishment of such buffers where none exist upon change of land use. The nutrient management rule requires fertilizer applicators basinwide to either have certified plans in place for lands to which they apply fertilizer, or to take training within 5 years on developing such plans. Homeowners were not subject to this requirement; instead the Division was to develop and implement an education program targeting homeowners.

The nonpoint source rules have been fully implemented as of 2006. Agriculture exceeded its goal by 2004, with annual reports currently estimating nitrogen loss reductions exceeding 40%. Approximately 1,600 applicators were trained under the nutrient management strategy. Under the stormwater rule local governments have been implementing their new development permitting requirements through their locally adopted stormwater ordinances and programs since 2004. Additionally, the riparian buffer rule has been enforced by the Division since 2000.

In addition to the nutrient strategy's nonpoint source rules, other nonpoint source control initiatives in the Tar Pamlico River Basin continue beyond the terms of this Agreement. Several of the major initiatives include the following voluntary and regulatory programs:

- State and federal regulation of confined animal operations,
- Phase II of federal NPDES stormwater regulation, encompassing several urbanized areas in the Basin,
- State Coastal stormwater regulation applicable to Beaufort County,
- State-mandated local stormwater regulation in Water Supply Watersheds throughout the Basin,
- State regulations protecting High Quality Waters and waters supporting listed aquatic species,
- State and federal wetlands and stream protection and mitigation regulations,
- A host of state and federal agriculture cost share and incentive programs, and technical assistance and education for farmers,
- NC Nonpoint Source Management Program providing state-wide and coastal NPS goal-setting, coordination, and grant funding (CWA Section 319) for protection and restoration of water quality related to nonpoint sources of pollution,
- Other Clean Water Act water quality grant programs including Sections 104(b)(3) and 106, and
- Clean Water Management Trust Fund, a state grants program funding a range of water quality protection and improvement activities.

X. Termination of this Agreement

In the event that this Agreement is terminated for any reason, nutrient discharges by members of the Association shall be subject to the limits and other nutrient requirements of the group NPDES permit or, if no such permit has been issued and is effective, those in their individual permits. The Division may also evaluate the need for additional rulemaking to regulate point sources.

Annual Nutrient Loads And Caps, Tar-Pamlico Basin Association

Phase I

Combined N+P	1991[1]	1992[1]	1993[1]	1994[1]
Loading Cap [a] (lb/yr)	1,157,426	1,102,310	1,047,195	936,964
Actual Load (lb/yr)	1,017,198	961,497	919,805	818,355
Load as % of Cap	88	87	88	87
Average Flow (MGD)	24.88	26.86	28.46	26.65

Phase II

Separate N, P	1995[2]	1996[2]	1997[2]	1998[2]	1999[2]	2000[2]	2001[3]	2002[4]	2003[4]	2004[4]
Loading Cap [a] (lb/yr)	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 893,435 P: 153,759	N: 930,288 P: 161,070	N: 930,288 P: 162,467	N: 930,288 P: 162,467	N: 930,288 P: 162,467
Actual Load (lb/yr)	N: 821,402 P: 82,365	N: 780,918 P: 95,385	N: 706,955 P: 80,539	N: 760,111 P: 81,271	N: 682,277 P: 70,662	N: 656,950 P: 66,749	N: 617,201 P: 72,157	N: 615,817 P: 75,125	N: 682,824 P: 68,026	N: 576,352 P: 74,911
Load as % of Cap	N: 92 P: 54	N: 87 P: 62	N: 79 P: 52	N: 85 P: 53	N: 76 P: 46	N: 74 P: 43	N: 66 P: 45	N: 65 P: 46	N: 72 P: 42	N: 61 P: 46
Average Flow (MGD)	31.03	33.57	29.84	33.31	33.39	32.74	30.21	30.54	36.86	29.65

ANNUAL NUTRIENT LOADS AND CAPS, TAR-PAMLICO BASIN ASSOCIATION

PHASE III

Separate N, P	2005[5]	2006[5]	2007[5]	2008[5]	2009[5]	2010[5]	2011[5]	2012[5]	2013[5]
Loading Cap [a] (lb/yr)	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070	N: 891,271 P: 161,070
Actual Load (lb/yr)	N: 533,562 P: 86,569	N: 512,724 P: 103,606	N: 543,362 P: 110,401	N: 559,572 P: 96,609	N: 602,038 P: 89,781	N: 637,916 P: 82,369	N: 646,531 P: 99,966	N: 624,664 P: 101,805	N: 600,688 P: 99,190
Load as % of Cap	N: 60 P: 54	N: 58 P: 64	N: 61 P: 69	N: 63 P: 60	N: 67 P: 56	N: 72 P: 51	N: 73 P: 62	N: 70 P: 63	N: 67% P: 62%
Average Flow (MGD)	29.21	32.85	27.05	27.39	28.0	30.5	28.6	30.5	34.1

♦ Loads estimated by NC Division of Water Quality. Equal to the sum of calendar-year monthly load values for each facility, which are based on minimum biweekly nutrient concentrations and daily mass flows.

[a] Cap values and changes result from the following:
1. Phase I – Original 12-member Association.
2. Phase II through 2000 – 14-member Association.
3. 2001 – Robersonville added, 15-member Association.
4. 2002 – Scotland Neck added, 16-member Association.
5. 2005 – National Spinning removed, 15-member Association in Phase III

APPENDIX B

Table of Point Source Dischargers to the Tar-Pamlico River Basin

Permit	Owner	Facility	Permitted Flow (MGD)	Sub-basin	Receiving Stream
Association Members					
NC0030317	City of Rocky Mount	Tar River Regional WWTP	21.0	02	TAR RIVER
NC0023931	Greenville Utilities Commission	GUC WWTP	17.5	05	TAR RIVER
NC0020605	Town of Tarboro	Tarboro WWTP	5.0	03	TAR RIVER
NC0025054	City of Oxford	Oxford WWTP	3.5	01	Fishing Creek
NC0020648	City of Washington	Washington WWTP	3.65	07	TAR RIVER
TBD	City of Creedmoor	Creedmoor WWTP*	TBD	TBD	TBD
NC0069311	Franklin County	Franklin County WWTP	3.0	01	Cedar Creek
NC0020834	Town of Warrenton	Warrenton WWTP	2.0	04	Fishing Creek
NC0026042	Town of Robersonville	Robersonville WWTP	1.8	06	Flat Swamp
NC0020231	Town of Louisburg	Louisburg WWTP	1.37	01	TAR RIVER
NC0026492	Town of Belhaven	Belhaven WWTP	1.0	07	Battalina Creek
NC0025402	Town of Enfield	Enfield WWTP	1.0	04	Fishing Creek
NC0023337	Town of Scotland Neck	Scotland Neck WWTP	0.675	04	Canal Creek
NC0020061	Town of Spring Hope	Spring Hope WWTP	0.4	02	TAR RIVER
NC0020435	Town of Pinetops	Pinetops WWTP	0.3	03	Town Creek
NC0042269	Town of Bunn	Bunn WWTP	0.15	01	Crooked Creek
		Total Permitted Flow =	**62.35**		

* City of Creedmoor only a proposed discharge at this time. Permitted flow, Sub-basin, and stream are to be determined.

APPENDIX B (CONTINUED)

Permit	Owner	Facility	Permitted Flow (MGD)	Sub-basin	Receiving Stream
Non-Association Domestic Less than 0.05 MGD					
NC0036919	Town of Pantego	Pantego WWTP	0.006	07	Pantego Creek
NC0040584	Pantego Rest Home	Pantego Rest Home	0.004	07	Pantego Creek
NC0037231	Martin County Schools	Bear Grass El Sc WWTP	0.005	06	Turkey Swamp
NC0038580	Halifax County Schools	Eastman M School WWTP	0.0048	04	Little Fishing Creek
NC0038610	Halifax County Schools	Pittman El School WWTP	0.0096	04	Burnt Coat Swamp
NC0038644	Halifax County Schools	Dawson El School WWTP	0.0073	04	Deep Creek
NC0050415	Edgecombe County Schools	Phillips Middle School	0.010	02	Moccasin Creek
NC0050431	Edgecombe County Schools	North Edgecombe H Sl	0.02	02	Swift Creek
NC0037885	Nash/Rocky Mount Schools	Southern Nash Junior H S	0.015	02	TAR RIVER
NC0047279	C&J Bradshaw LLC	Heritage Meadows WWTP	0.010	01	North Fork Tar River
NC0029131	Kittrell Job Corps Center	Kittrell Job Corps Center	0.025	01	Long Creek
NC0048631	Interstate Property Mgmt Inc	Long Creek Court WWTP	0.007	01	Long Creek
Non-Association Domestic 0.05 to 0.5 MGD					
NC0069426	Dowry Creek Community Assc.	Dowry Creek	0.05	07	Pungo River
NC0021521	Town of Aurora	Aurora WWTP	0.12	07	South Creek
NC0025691	Town of Littleton	Littleton WWTP	0.28	04	Butterwood Creek
NC0050661	Town of Macclesfield	Macclesfield WWTP	0.175	03	Bynums Mill Creek
NC0042510	Total EnvSolutions Inc	Lake Royale WWTP	0.080	01	Cypress Creek
Non-Association Domestic 0.5 MGD or Greater					
None					
Non-Association Industrial Discharging Nutrients					
NC0003255	PCS Phosphate Company Inc	PCS Phosphate Co- Aurora	NL	07	PAMLICO RIVER
NL = No Limit					
		Total Permitted Flow =	**0.83**		

APPENDIX C

Association Nitrogen Offset Credit Register

Date of Funding Check	Purpose of Funds	Funds Origin	Payment	Cumulative Payment	Offset Rate ($/lb N)	N Credit (lb)	BMP N Credit Balance (lbs), 12/31/17 Expiration*	Gaug & Coordinator N Credit Balance (lbs)
Phase I								
9/30/1992	Agriculture BMPs	TPBA	$ 150,000	$ 150,000	$25.40	5,905	5,905	
9/30/1992	Chicod Creek BMPs	EPA 104(b)3	$ 250,000	$ 400,000	$25.40	9,842	15,748	
9/30/1992	Chicod Creek BMPs	EPA 104(b)3	$ 100,000	$ 500,000	$13.15	7,604	23,352	
9/30/1993	Daniel's/Nutrient BMPs	EPA 104(b)3	$ 350,000	$ 850,000	$13.15	26,615	49,967	
Remaining Phase I Credits							**4,923***	
Phase II								
5/31/1996	Coordinator position	TPBA	$ 30,000	$ 30,000	$13.15	2,281		2,281
6/30/1996	Coordinator position	TPBA	$ 22,860	$ 52,860	$13.15	1,738		4,019
7/26/1996	Greenville gauging station	TPBA	$ 33,600	$ 86,460	$13.15	2,555		6574
11/20/1997	Greenville gauging station	TPBA	$ 17,100	$ 103,560	$13.15	1,300		7874
7/7/1998	Coordinator position	TPBA	$ 30,000	$ 133,560	$13.15	2,281		10,155
6/4/1999	Coordinator position	TPBA	$ 30,000	$ 163,560	$13.15	2,281		12,436
12/5/1999	Greenville gauging station	TPBA	$ 17,800	$ 181,360	$13.15	1,353		13,789
12/29/2000	Greenville gauging station	TPBA	$ 18,700	$ 200,060	$13.15	1,422		15,211
7/9/2001	Coordinator position	TPBA	$ 30,000	$ 230,060	$13.15	2,281		17,492
12/5/2001	Greenville gauging station	TPBA	$ 17,700	$ 247,760	$13.15	1,346		18,838
4/4/2002	Coordinator position	TPBA	$ 30,000	$ 277,760	$13.15	2,281		21,119
2/26/2003	Greenville gauging station	TPBA	$ 18,100	$ 295,860	$13.15	1,376		22,495
5/6/2003	Coordinator position	TPBA	$ 30,000	$ 325,860	$13.15	2,281		24,776
1/7/2004	Greenville gauging station	TPBA	$ 18,100	$ 343,960	$13.15	1,376		26,152
6/16/2004	Coordinator Position	TPBA	$ 30,000	$ 373,960	$13.15	2,281		28,433
11/8/2004	Greenville gauging station	TPBA	$ 25,233	$ 399,193	$13.15	1,918		30,351

APPENDIX C (Continued)

Association Nitrogen Offset Credit Register

Date of Funding Check	Purpose of Funds	Funds Origin	Payment	Cumulative Payment	Offset Rate ($/lb N)	N Credit (lb)	BMP N Credit Balance (lbs), 12/31/17 Expiration*	Gauge & Position N Credit Balance (lbs)
Phase III								
4/21/2005	Coordinator Position	TPBA	$ 30,000	$ 429,193	$13.15	2,281		32,632
12/19/2005	Greenville gauging station	TPBA	$ 25,233	$ 444,427	$13.15	1,918		34,550
3/16/2006	Coordinator Position	TPBA	$ 30,000	$ 474,427	$13.15	2,281		36,831
1/30/2007	Greenville gauging station	TPBA	$ 20,233	$ 494,600	$13.15	1,538		38,369
5/12/2009	Greenville gauging station	TPBA	$ 22,200	$ 517,860	$13.15	1,688		40,057
5/12/2009	Greenville gauging station	TPBA	$ 21,600	$ 538,460	$13.15	1,642		41,699
1/19/2010	Greenville gauging station	TPBA	$ 4,725	$ 543,185	$13.15	359		42,058
4/8/2010	Greenville gauging station	TPBA	$ 4,725	$ 547,910	$13.15	359		42,417
7/12/2010	Greenville gauging station	TPBA	$ 4,725	$ 552,635	$13.15	359		42,776
9/16/2010	Greenville gauging station	TPBA	$ 4,725	$ 557,360	$13.15	359		43,135
7/27/2011	Greenville gauging station	TPBA	$ 14,100	$ 571,460	$13.15	1,072		44,207
9/21/2011	Greenville gauging station	TPBA	$ 4,800	$ 576,260	$13.15	365		44,572
1/13/2012	Greenville gauging station	TPBA	$ 4,800	$ 581,060	$13.15	365		44,937
4/12/2010	Greenville gauging station	TPBA	$ 4,800	$ 585,860	$13.15	365		45,302
6/5/2012	Greenville gauging station	TPBA	$ 4,800	$ 590,660	$13.15	365		45,667
9/17/2012	Greenville gauging station	TPBA	$ 4,800	$ 595,460	$13.15	365		46,032
2/26/2013	Greenville gauging station	TPBA	$ 4,800	$ 600,260	$13.15	365		46,397
4/23/2013	Greenville gauging station	TPBA	$ 4,800	$ 605,060	$13.15	365		46,762
7/8/2013	Greenville gauging station	TPBA	$ 4,800	$ 609,860	$13.15	365		47,127
9/11/2013	Greenville gauging station	TPBA	$ 4,800	$ 614,660	$13.15	365		47,492
1/14/2014	Greenville gauging station	TPBA	$ 4,800	$ 619,460	$13.15	365		47,857
Total Phase II + Phase III Credits								**47,857**

Note:
Phase I banked credits that were earned by funding Ag Cost Share BMPs shall expire when BMP contract for the funded BMP expires under the Ag Cost Share Program. The Table in Appendix D details the credit value of remaining active Ag BMP contracts funded in Phase I. These Phase I credits will expire by calendar year 2017. Credits earned for funding the gauge and coordinator position during Phase II, III, and IV will remain available as outlined in Section V.B.2 of this Agreement.

APPENDIX D

Value of Active Agriculture Cost Share BMP Contracts Funded by Association

Year	# of Contracts Remaining	Total Offset Value of Active Contracts	Offset Credit (lb)
2015	15	$64,740.00	4,923
2016	12	$54,557.00	4,148
2017	0	$0.00	0

Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy: Phase IV

Agreed to on July 9, 2015 by:

S. Jay Zimmerman, P.G.
Director, Division of Water Resources

N. David Smith
Chief Deputy Commissioner, NC Department of Agriculture & Consumer Services

Adam Waters
Chairman, Tar-Pamlico Basin Association

Approved by:

Gerard P. Carroll
Chairman, NC Environmental Management Commission