# Tar-Pamlico Nutrient Strategy

## Fact Sheet

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| **Location:**<br>**River Basin:**<br>**Cataloging Unit:** | Eastern North Carolina – areas draining to the Pamlico River estuary<br>Tar-Pamlico<br>030201 |
| **Counties:** | Beaufort, Dare, Edgecombe, Franklin, Granville, Halifax, Hyde, Martin, Nash, Person, Pitt, Vance, Vance, Warren, Washington, Wilson |
| **Basin Area**<br>**Stream Miles**<br>**Major Tributaries:** | 6,148 $mi^2$<br>Over 2,300<br>Tar, Pungo, and Pamlico rivers, Fishing, Sandy, Tranters, and Town creeks |
| **Strategy Goal:** | Nitrogen: Achieve and maintain a 30% reduction from 1991 levels<br>Phosphorus: No increase from 1991 levels<br>(Goal applies to both point and nonpoint pollution sources) |
| **Land Use:** | Developed (5%), Agriculture (22%), Forest (21%), Open Water (24%), Wetlands (18%), Other (10%) (Source: 2011 NLCD) |
| **Strategy Website Link:** | bit.ly/Tar-PamlicoStrategy |
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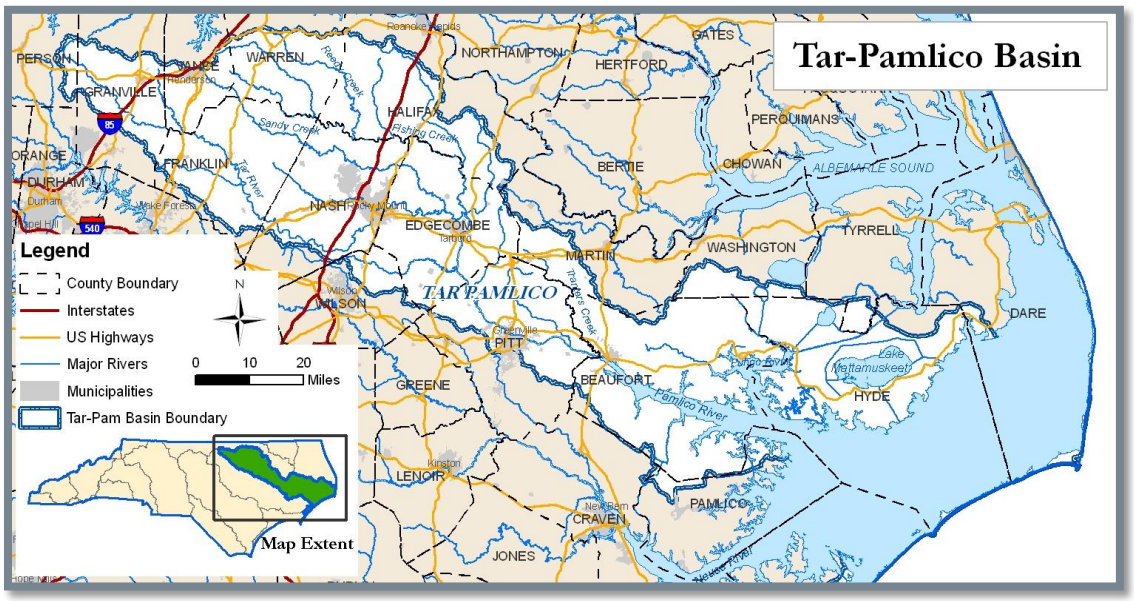
### Strategy Overview

Since the 1980s, symptoms of nutrient-related pollution have been present in the Tar-Pamlico Estuary. Excess nitrogen and phosphorus have caused persistent water quality issues including unsightly and potentially harmful algal blooms, low oxygen levels, and fish kills. In response, North Carolina designated these waters as "nutrient sensitive" and developed the Tar-Pamlico Nutrient Management Strategy.



## Strategy Overview (continued)

In preparation for the strategy, a mathematical model of the estuary was developed to estimate the nutrient reductions required to restore the estuary. Based on its results, a Total Maximum Daily Load (TMDL) was developed. The TMDL established a 30% reduction goal for nitrogen loading from 1991 levels while holding phosphorus loading to 1991 levels.

The Tar-Pamlico Nutrient Strategy was adopted by the N.C. Environmental Management Commission (EMC) in 2001 and consists of rules designed to equitably regulate nutrient pollution sources including wastewater, stormwater and agriculture. The rules also establish riparian buffer protections and mandate training for professionals that apply fertilizer. Finally, the strategy includes elements that allow nutrient trading to reduce loads from point sources and new development.

## Tar-Pamlico Nutrient Strategy Rules

### Agriculture

- Specifies farm operators covered under the Rule.
- Local Advisory Committee develops a local strategy and reports nutrient reduction progress.
- Basin Oversight Committee reviews and tracks agricultural sector's progress toward its reduction goals.

### Point Sources and Trading

- Point source agreements involving the Tar-Pamlico Basin Association and DWR govern 98% of permitted discharges.
- Currently in Phase 4 of the Agreement which runs through 2025.
- Details requirements for new and existing non-association dischargers operating in the basin.
- Allows nutrient trading from point to nonpoint sources.

### Nutrient Management

- Applies to fertilizer applicators, people who own or manage fertilized lands, and consultants who provide nutrient management advice.
- Specifies that fertilizer applicators either take state-sponsored nutrient management training or have a nutrient management plan in place for the lands to which they apply fertilizer.
- Directs DWR to develop a homeowner education program in the basin to help prevent nutrient runoff.

### Buffer Protection

- Protects and maintains existing 50-foot wide riparian buffers to help stabilize streambanks, prevent soil from eroding into the water, and act as a filter to remove pollutants.
- Applies to on all surface waters including intermittent and perennial streams, lakes, ponds, and reservoirs that are shown on a county soil map or USGS 1:24,000 topographic map.
- Details uses that apply to the undisturbed inner Zone 1 and outer Zone 2 of the riparian buffer.
- Specifies exemptions including the footprint of existing uses and agricultural uses.
- Details uses that are allowed, allowable with mitigation and prohibited within the buffer.

### New Development Stormwater

- Specifies the local governments covered by the rule.
- Requires local governments to identify and remove illicit discharges, have an education program regarding how to reduce nutrient runoff, and make efforts to treat runoff from existing developed areas.
- A nutrient buy-down option is included as a tool to achieve the required 4 lbs/ac/yr nitrogen and 0.4 lbs/ac/yr phosphorus on stormwater runoff. Development, however, must first meet the following conditions:
    - Nitrogen export for residential development cannot be greater than 6.0 lbs/ac/yr.
    - Nitrogen export for a commercial, industrial, or institutional development cannot be greater than 10.0 lbs/ac/yr.
    - If nitrogen export exceeds 6.0 lbs/ac/yr or 10.0 lbs/ac/yr for residential or commercial development respectively, then the developer must use BMPs or take part in an approved stormwater strategy to lower the nitrogen export. The offset payment option can then be offered to address the remaining reductions needed to meet 4.0 lb N and 0.4 lb P/ac/yr.

**For more information on the Tar-Pamlico Nutrient Strategy, please visit bit.ly/Tar-PamlicoStrategy**