

# What Does the Neuse River Wastewater Discharge Rule Say?

The wastewater rule establishes mass-based nutrient discharge limits for the nearly 180 facilities in the Neuse River Basin that have discharge permits from DWQ. The rule also addresses new or expanding discharges that may arise in the future.

## Nitrogen Limits

Effective on January 1, 2003, the nitrogen discharge limit reduces the nitrogen from point sources by 30 compared to their 1995 level.

The overall nitrogen discharge limit is 2.8 million pounds per year. Limits in terms of pounds per year are called "mass-based limits." Mass-based limits are flexible because they set limits on nitrogen but allow for daily and seasonal fluctuations in concentration. They also encourage innovative solutions, such as reusing wastewater rather than discharging it.

The overall nitrogen discharge limit is divided among three different groups of dischargers as follows:

- Dischargers with permitted flows greater than or equal to 500,000 gallons per day or 0.5 million gallons per day (MGD) downstream of Falls Lake dam have a combined limit of 2.45 million pounds per year.
- Dischargers with permitted flows greater than or equal to 0.5 MGD upstream of the dam have a combined limit of 444,000 pounds per year.
- Dischargers with permitted flows less than 0.5 MGD have a combined limit of 280,000 pounds per year.

Dischargers with permitted flows greater than 0.5 MGD have two options for meeting the requirements of the rule:

- Option 1: Meet Individual Mass-Based Limits. Each discharger's limit is the same fraction of the group's total allocation (2.45 million or 440,000 pounds per year, depending on the location) as the discharger's permitted flow is of the group's total flow. These allocations will be included in each discharger's permit as discharge limits.
- Option 2: Join the Nitrogen Trading Coalition. Dischargers can establish a nitrogen trading coalition that collectively meets a nitrogen limit equal to the combined nitrogen limits of its members.

Coalition members will enter into a formal agreement with the Environmental Management Commission that establishes the combined nitrogen limit. Forty facilities have submitted letters of intent to join the coalition.

Dischargers below the 0.5 MGD threshold will be required to meet their collective limit but will not have nitrogen limits in their permits. These dischargers may also join the trading coalition.

DWQ may set tighter limits on a case-by-case basis, if necessary, to protect the river and its tributaries from any local water quality impacts.

The limits become effective on January 1, 2003.

## Phosphorus Limits

The rule continues the current 2.0 mg/L concentration limit on phosphorus for dischargers above Falls Lake Dam, and extends the same limit to dischargers below the dam.

## Optimization of Existing Facilities

Dischargers with permitted flows greater than or equal to 0.5 MGD have one year to evaluate and optimize nutrient

removal at their facilities. This ensures that dischargers take full advantage of operational and other low-cost improvements to achieve immediate, cost-effective nitrogen reduction. Many dischargers are already making improvements.

### **Offset Payments**

Offset payments are required if the trading coalition exceeds its limit or a new or expanding discharger has to obtain a nitrogen allocation. Offset payments go to the Wetland Restoration Fund to pay for nonpoint source controls sufficient to remove the same amount of nitrogen.

### **New or Expanding Discharges**

Nitrogen and phosphorus limits for new and expanding discharges are tighter than for existing flows: 3.5 mg/L total nitrogen and 1.0 mg/L total phosphorus. In addition, new or expanding facilities must have a nitrogen allocation in order to discharge the new flows. If they are unable to obtain an allocation by purchasing it from existing dischargers, they must make offset payments equivalent to twice the standard offset payment.

---

## **The Top Seven Reasons Why the EMC Took This Approach for Wastewater Discharges**

### **Reason 1: The public needs and expects additional controls to protect and restore the Neuse River.**

Permittees, regulators, scientists, environmental groups, and involved citizens agree that water quality in the estuary has deteriorated over the last 25 years. Our problems with nitrogen and fish kills are hurting our economy -- tourism, the seafood/fisheries industries, ports, property values and our state's public image are all suffering. The combined economic impacts are impossible to fully quantify. This strategy addresses point source dischargers' contribution to the problem.

### **Reason 2: The strategy is consistent with the basinwide management plan for the Neuse River.**

In 1993, DWQ developed the first basinwide management plan for the Neuse River Basin. Basinwide plans inventory the quality of rivers and streams throughout a basin and identify impacted areas. Basinwide plans also identify sources and impacts of pollutants and recommend actions to correct problems. Not surprisingly, nutrient loads into the Neuse River were identified as the major water quality issue in the Neuse. This point source strategy is a critical step in addressing the problem.

### **Reason 3: The strategy is reasonable and equitable.**

Many of the affected dischargers had input into developing the point source strategy. The strategy considers the size of individual dischargers and their locations in the basin. Small dischargers also have to help meet the 30 percent reduction goal.

### **Reason 4: The point source strategy protects the Neuse River now and in the future.**

The strategy requires dischargers throughout the basin to control their nitrogen discharges to meet the 30 percent reduction goal within 5 years. Once the nitrogen limit is reached, nitrogen levels from dischargers must be held at that level regardless of future development. Dischargers do have the option of making Offset Payments to obtain additional nitrogen allocations.

**Reason 5: The strategy is flexible and will promote innovative solutions.**

All dischargers have option of participating in a nitrogen trading coalition. Coalition members can decide for themselves how to achieve the most cost-effective nitrogen reductions across the basin. As discharges in the basin increase, the strategy will encourage innovative solutions to reduce discharges of nutrients. For example, conserving water and reusing treated wastewater effluent could both reduce volumes of flow and nutrients to the river.

**Reason 6: The strategy is compatible with other requirements.**

The rule is consistent with Senate Bill 1339 which establishes a limit of 30 percent nutrient reduction from dischargers in nutrient sensitive waters. It is also compatible with House Bill 515, which calls for controlling nutrients from discharges into Nutrient Sensitive Waters.

**Reason 7: The Neuse River is not the only troubled water in our state.**

Many areas of the state are experiencing rapid increases in population and urban development. In many cases, these changes are degrading the quality of our rivers and streams. The Neuse River is the first basin to have a comprehensive, mandatory strategy for reducing nutrients, but it may not be the last. The lessons we learn in the Neuse River basin will help us to effectively protect water quality across North Carolina.