

Amended Scope Statement  
Relating to Development of Additions to Chapters NR 102 and NR 104, Wis. Adm. Code,  
to incorporate Nutrient Water Quality Criteria for Lakes and Streams  
and to Chapters NR 106 and NR 216, Wis. Adm. Code,  
to incorporate provisions for developing Nutrient Criteria-based  
Water Quality Based Effluent Limits

This amended scope statement is a result of discussions during the first meeting of an external advisory committee where there was a strong preference expressed by a number of committee members to also address procedures for developing nutrient criteria-based effluent limits for municipal and industrial wastewater treatment plants and municipal storm water discharges.

**Subject/Objective of the Proposed Rule**

To address nuisance algae and aquatic weed problems in lakes and low oxygen stress to fish and other aquatic life streams, the U. S. Environmental Protection Agency (EPA) is requiring all states, including Wisconsin, to adopt nutrient (phosphorus and nitrogen) criteria as part of its water quality standards. EPA's guidance identifies values for principally four "ecoregions" in the state, the northern forested areas, a west to east central zone, the driftless area and the southeastern quarter of the state. It also calls for adoption of "causal" pollutants, phosphorus and nitrogen, and "response" problems, algal biomass and high turbidity. EPA's guidance is based on the lowest 25<sup>th</sup> percentile of available data for each region, including data from other states. If EPA's approach were used, inevitably 75 percent of the lakes or streams – regardless of the actual conditions in the water -- would be considered as not meeting water quality standards and would need to be placed on the state's 303(d) impaired waters list.

The specific water quality standards criteria would be placed in ch. NR 102 while lake or stream-specific criteria, if any, would be placed in ch. NR 104. Upon adoption, the criteria will be used to:

- develop nutrient water quality based municipal and industrial WPDES permit effluent limits;
- identify impaired waters under s. 303(d) of the Clean Water Act;
- further identify watersheds where nonpoint source controls, including performance standards and prohibitions, are most needed; and
- develop Total Maximum Daily Load (TMDL) allocations.

The procedures for developing water quality based effluent limits using the criteria would be placed in NR 106 for municipal and industrial wastewater treatment plants and in ch. NR 216 for municipal storm water discharges.

**Description of Policy Issues/Analysis of Policy Alternatives**

EPA provides a number of options to the states. States may adopt nutrient criteria based on:

- EPA's guidance values (based on the 25<sup>th</sup> percentile of available data for multi-state ecoregions);
- the 25<sup>th</sup> percentile of available data for the state;
- the 75<sup>th</sup> percentile of conditions found in good quality lakes and streams; deemed as "least-impacted" reference conditions in EPA guidance; or
- analyses of effects found on the fish and aquatic life in the state's lakes and streams.

Also, states may adopt criteria:

- uniformly applicable across the state;
- varying by geographic regions determined by the state; or
- varying by EPA's ecoregions.

Finally, Department staff anticipates that EPA may accept promulgation on only phosphorus criteria instead of the suite of parameters (phosphorus, nitrogen, algal biomass and turbidity) identified in federal guidance.

If the state chooses to vary from EPA's guidance, the state must justify its approach to EPA. If the state chooses to not adopt nutrient criteria or if EPA finds the state's approach unacceptable, EPA may "over-promulgate" its own criteria (described above) for the state. EPA may "over-promulgate" as soon as 2008.

To date, EPA has not issued nutrient criteria guidance for the Great Lakes and their nearshore waters, including bays and harbors. In addition to adopting criteria for inland lakes and streams, criteria could be developed for these interstate waters. EPA also recommends that the criteria take into account the quality of downstream waters, including the Gulf of Mexico since nutrients, especially nitrogen, flow with the water and may cause water quality problems long distances from their source. Beyond use of the 25<sup>th</sup> percentile of available nitrogen data, EPA has not provided guidance on how to take into account the hypoxic (very low oxygen) conditions of the Gulf.

To better address the options listed above the Department requested researchers from the Department's Integrated Science Services Division and the U. S. Geological Survey (Department of Interior) to study Wisconsin streams and rivers. One study reports was published in 2006 and the second will be published in 2008. The first report evaluates 250 small and medium sized streams. The second report dealing with over 30 large streams and rivers will be completed late this year. The Department intends to use the results of these two reports, related study reports from Minnesota and Michigan and past Department studies to develop and recommend criteria that are specific to Wisconsin's lakes and streams.

### **Statutory Authority**

Statutory authority: ss. 227.11(2), 281.15, 282.001, 283.13(5) and 283.33 Stats.

Statutes interpreted: s. 281.15, Stats.

### **Estimate of Time Needed to Develop the Rule**

Staff estimates that 20 to 30 months are needed to complete promulgation of the nutrient criteria for lakes and streams. An updated target for completion of the promulgation process is late 2008 to early 2009. Due to the complexity of the issue, a Department work group will need to review both recent and past studies, evaluate other pertinent data, and analyze implementation issues. After the work group process has sufficiently advanced, an external advisory group will be convened. Public hearings should be held in late-summer to fall of 2008. Overall, it is estimated that approximately 2000 hours in staff time will be needed for the various steps in this process.

### **All Entities Affected by the Rule**

Either directly or indirectly, the nutrient criteria will likely affect the majority of point sources and urban and rural nonpoint sources. The number and extent that will be affected will depend on the values promulgated.

For municipal and industrial point sources, the nutrient criteria may require phosphorus removal for dischargers below the Ch. NR 217, Wis. Adm. Code, phosphorus effluent limits threshold levels. It may also require lower limits for those with either 1 mg/l or alternate limits under Ch. NR 217. At the same time, there will be a group of point source dischargers unaffected by the rule. Again, the number and the extent of any additional point source limits cannot be determined at this time.

Nutrient criteria will likely result in some additional lakes or streams being added to the section 303(d) Clean Water Act impaired waters list. TMDLs for these waters will identify the need for nutrient control from agricultural and urban nonpoint sources in watersheds draining to the impaired waters. In many

situations, installation of best management practices to meet the required nonpoint source performance standards and prohibitions will be sufficient to attain and maintain the nutrient criteria. In those situations, no additional nonpoint source control is needed. In other situations, where the nonpoint source performance standards and prohibitions are insufficient, the result of this rule will be additional nonpoint source controls.

### **Summary and Comparison with Existing or Proposed Federal Regulations**

In 2000, EPA promulgated nutrient criteria guidance for both lakes and streams and set a promulgation deadline of the end of 2004. For states choosing to conduct applicable studies, EPA has extended that deadline for states an additional three years. The estimated time needed to develop the rule may extend somewhat beyond EPA's extended schedule.

As briefly described above in the Subject/Objective section of the scope statement, states have the option to directly promulgate EPA's guidance values as criteria or to develop and justify reference or effects-based values as criteria for lakes and streams.

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