



FACT SHEET

National Strategy for the Development of Regional Nutrient Criteria

Abstract

The U.S. Environmental Protection Agency is presenting a National strategy which describes the approach the Agency will follow in developing nutrient information and working with States and Tribes to adopt nutrient criteria as part of State water quality standards. The strategy presents overenrichment assessment tools and recognizes current capabilities for conducting these assessments at the regional watershed and waterbody levels. The major focus of this strategy is the development of waterbody-type technical guidance and region-specific nutrient criteria by the year 2000. Once waterbody-type guidance and nutrient criteria are established, EPA will assist States and Tribes in adopting numerical nutrient criteria into water quality standards by the end of 2003.

The President's Clean Water Action Plan

On October 18, 1997, Vice President Gore requested the Secretary of Agriculture and the Administrator of the Environmental Protection Agency (EPA), in consultation with all other affected agencies, to develop a comprehensive Action Plan that builds on the Administration's clean water successes over the past five years and addresses three major goals: enhanced protection from public health threats posed by water pollution; more effective control of polluted runoff; and promotion of water quality protection on a watershed basis. As part of this Action Plan, the Vice President expects that EPA will identify the major sources of nitrogen and phosphorus in our waters, and identify actions to address these sources. In particular, the Vice President called upon EPA to accelerate nutrient water quality criteria development for waters in every geographic region in the country and to establish a schedule so that EPA and States/Tribes are implementing a criteria system for nitrogen and phosphorus runoff for lakes, rivers, and estuaries by the year 2000.

On March 24, 1998, the President's Clean Water Action Plan was presented in the *Federal Register*. The Clean Water Action Plan builds on the Vice President's initiative and specifically states that EPA will establish nutrient criteria that reflect the different types of water bodies and different ecoregions of the country and will

assist States and Tribes in adopting numeric water quality standards based on these criteria.

Background

The National Water Quality Inventory: 1996 Report to Congress Executive Summary cites nutrients (nitrogen and phosphorus) as one of the leading causes of water quality impairment in our Nation's rivers, lakes and estuaries. Forty percent of the rivers were impaired due to nutrient enrichment; fifty-one percent of the surveyed lakes, and fifty-seven percent of the surveyed estuaries were similarly adversely affected. Nutrients have also been implicated with both the large hypoxic zone in the Gulf of Mexico, hypoxia observed in several East Coast States, and *Pfiesteria*-induced fish kills and human health problems in the coastal waters of several East Coast and Gulf States.

The national response to the nutrient problem has been limited primarily because of concerns over the scale of the problem, and because of the tremendous variability of nutrient conditions, both natural and cultural, throughout the nation.

Presently, the only national water quality criteria in existence are for nitrate nitrogen and phosphorus. In 1976, in EPA's publication entitled *Quality Criteria for Water* (also known as the Red Book), EPA presented ambient water quality criteria for nitrates, nitrites and phosphorus. The criterion for nitrate nitrogen

was 10 mg/L for the protection of domestic water supplies. The nitrate criteria were intended to prevent overenrichment and to protect human and animal health. The phosphorus criterion was 0.10 ug/L elemental phosphorus for the protection of marine and estuarine waters. This criterion was based on a conservative estimate to protect against the toxic effects of the bioconcentration of elemental phosphorus to estuarine and marine organisms, and not on the potential to cause eutrophication.

In order to expand and update EPA guidance in the area of nutrient assessment and control, the Agency held a National Nutrient Assessment Workshop (see Proceedings of the National Nutrient Assessment Workshop: December 4-6, 1995, EPA 822-R-96-004). In response to this workgroup effort to address nutrient assessment and overenrichment, EPA developed a peer reviewed national nutrient criteria strategy.

Key Elements of the National Nutrient Strategy

The major elements of this strategy include:

- Use of a regional and waterbody-type approach for the development of nutrient water quality criteria.
- Development of waterbody-type technical guidance documents (*i.e.*, documents for streams and rivers; lakes and reservoirs; estuaries and coastal waters; and wetlands) that will serve as "user manuals" for assessing trophic state and developing region-specific nutrient criteria to control overenrichment.
- Establishment of an EPA National Nutrient Team with Regional Nutrient Coordinators to develop regional databases and to promote State and Tribal involvement.
- Development by EPA of nutrient water quality criteria guidance in the form of numerical regional target ranges, which EPA expects States and Tribes to use in

implementing State management programs to reduce overenrichment in surface waters, *i.e.*, through the development of water quality criteria, standards, NPDES permit limits, and total maximum daily loads (TMDLs).

- Monitoring and evaluation of the effectiveness of nutrient management programs as they are implemented.

Affect on State and Regional Offices

EPA believes the development of waterbody-type guidance and regional nutrient criteria can only be successfully accomplished with the cooperation and contributions of EPA Regional Offices and State and Tribes, and other expert parties. EPA Regions will be asked to form regional nutrient teams which draw on the talents and knowledge of States, Tribes, universities and other interested/concerned parties within each EPA Region. States and Tribes, specifically will be asked to provide information on nutrient levels in their surface waters to help provide information essential for identifying reference conditions (minimally impacted waters) and developing regional nutrient criteria.

Information

For additional information concerning this National Strategy, contact Bob Cantilli, Health and Ecological Criteria Division (4304), 401 M Street, S.W., Washington, D.C., 20460 (telephone: 202- 260-5546).

You may view the Federal Register notice that describes the National Nutrient Strategy on the Internet at:

<http://www.epa.gov/OST/Rules/index.html#open>. The notice gives complete information on how to obtain additional information, how to review the complete administrative record for the National Nutrient Strategy, and how to solicit public comment.