City of Independence

WATER POLLUTION CONTROL DEPARTMENT

Comments on Draft Regulatory Impact Report for Nutrients in Lakes and Reservoirs

Nutrient criteria for lakes and reservoirs are not expected to directly affect the City of Independence in the near future. However, we wish to comment on the Missouri Department of Natural Resources (MDNR) draft Regulatory Impact Report (RIR) primarily because of the precedent that may be set for development of nutrient criteria for streams and rivers.

4. A description of the environmental and economic costs and benefits of the proposed rule.

- The draft RIR description of economic costs and benefits of the proposed rule is inadequate. The Washington University paper provides some cost information for phosphorus removal, but the RIR does not evaluate the economic impacts on the nearly 2,000 permitted dischargers located within the watersheds of classified lakes and reservoirs in Missouri.
- No cost data are provided in the RIR for nitrogen removal. Missouri is proposing to adopt nutrient criteria for Total Phosphorus (TP), Total Nitrogen (TN) and chlorophyll a. The RIR needs to analyze potential economic costs of providing nitrogen removal for the 2,000 permitted dischargers.
- Nitrogen removal costs will depend upon the level of nitrogen removal required. The Chesapeake Bay Program in 2004 characterized Biological Nutrient Removal technology as achieving effluent concentrations of TN = 8 mg/L at a cost of $8.56/lb. Technology required for nitrogen removal to 3 mg/L could cost in excess of five times more per pound, according to the National Association of Clean Water Agencies.
- Both capital and operating costs need to be considered in the RIR.
- The Chesapeake Bay Program and its members (e.g., States of Maryland, Virginia and Pennsylvania, District of Columbia) are potential sources for nutrient removal cost information.

8. A description of any alternative method for achieving the purpose the proposed rule that were seriously considered by the department and the reasons why they were rejected in favor of the proposed rule.

- As recently as the May 23, 2007 stakeholder meeting, the department was planning to adopt lake nutrient criteria for TP only. The RIR should explain why this approach was rejected. We understand that the decision to adopt criteria for TP, TN and chlorophyll a was based upon input from EPA, but a more thorough discussion would be appropriate.
- The reference to section 304(a) of the Clean Water Act in this section of the RIR seems to imply that section 304(a) requires the identification of reference bodies to use as bench marks. This is inaccurate. Section 304(a) requires EPA to develop water quality criteria; it does not require reference bodies.
- EPA's nutrient water criteria use the reference approach, but EPA guidance provides states with flexibility in developing nutrient criteria. Geoffrey Grubbs, Director of the

Office of Science and Technology, in a November 14, 2001 Memorandum on Development and Adoption of Nutrient Criteria into Water Quality Standards stated,

> "EPA emphasized that states and authorized tribes have several options available to them in developing and adopting water quality criteria for nutrients. EPA recommended the following approaches, in order of preference: 1) wherever possible, develop nutrient criteria that fully reflect localized conditions and protect specific designated uses, using the process outlined in the technical guidance manuals; 2) adopt EPA's recommended section 304(a) criteria for nutrients, either as numeric criteria or as a translator for a state or tribal narrative criterion; or 3) use other scientifically defensible methods and appropriate water quality data to develop criteria protective of designated uses."

- We disagree with the RIR statement that the current draft rule is specifically linked to beneficial uses of water bodies. Traditional water quality criteria and standards (for toxics, dissolved oxygen, etc.) are based upon the development of dose response relationships. In such applications the relationships between pollutant values and effects are specific and measured. Relationships between nutrient values and aquatic life have not been developed in a meaningful way in the EPA criteria. We understand that the department does not have sufficient data available to establish a dose response relationship between nutrient levels and effects on aquatic life.