

September 1, 2009

Dr. Thomas Armitage  
Designated Federal Officer  
EPA Scientific Advisory Board (1400F)  
U. S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C., 20460

Re: Empirical Approaches for Nutrient Criteria Derivation  
Draft Guidance Document

Dear Dr. Armitage:

Per FRL-8946-7 dated August 11, 2009, the Illinois Association of Wastewater Agencies (IAWA) wishes to submit the following written comments for consideration by the SAB Committee members charged with reviewing the subject document.

IAWA represents 54 wastewater collection and treatment agencies throughout Illinois plus 39 affiliate members consisting of private practice and not-for-profit individuals and companies. Its membership represents decades of operating experience in the wastewater industry providing wastewater collection and treatment services to over 8.6 million people, or over 75 percent of total wastewater flow, in Illinois.

The general mission of IAWA member agencies is to treat wastewater and protect the environment. To that end, IAWA is committed to meeting water quality standards when they are developed by scientifically defensible criteria that show a defined cause effect relationship. However, we strongly disagree that the empirical approaches in the draft guidance document provide consistent and clear-cut results that can be reliably applied to the development of statewide nutrient criteria in Illinois.

IAWA has reviewed the document, "Analysis of Illinois Stream and River Nutrient and Biological Data for the Nutrient Scientific Technical Exchange Support (N-Steps), October 2, 2008", prepared by Tetra Tech for USEPA ("Tetra Tech Report"). It presents candidate nutrient concentrations through a consideration of nutrient concentration distributions in the Central Corn Belt Plains and the Interior River Valley and Hills Ecoregions. The report also developed candidate endpoints on an ecoregional basis using conditional probability analysis based upon algal, macroinvertebrate, and fish metrics. However, none of the suggested candidate nutrient concentrations are scientifically defensible for two major reasons:

1. Distributional nutrient concentration data are not associated with designated use impairments and, therefore, their use in water quality standard development is inappropriate, and
2. Tetra Tech did not follow the recommended protocols established for utilizing conditional probability to develop candidate nutrient endpoints. Consequently all

of their endpoints are speculative and based upon the unsupported assumption that the pollutant of concern caused the impact.

Most of the Tetra Tech Report focused on developing candidate nutrient endpoints through the conditional probability approach. The analysis was conducted presuming that nutrients were responsible for the observed biological responses, but no demonstration was made to support the presumption. The Illinois Council on Food and Agricultural Research (C-FAR) has conducted some excellent research studies in Illinois over the past few years for nutrient standards development. In that work they found that habitat, not nutrients, was the predominant factor in terms of biological metrics. Information presented in the C-FAR Final Report indicates that nutrient concentration covaries with habitat quality. Consequently, the alleged impairments attributed to nutrients, in all likelihood, are due to habitat alteration. Given the relationship between habitat and nutrient concentration, the cause of the biological metric responses cannot be differentiated between the two.

Because of this, if the Tetra Tech approach were to be used in Illinois, there is no assurance that there would be an environmental benefit. IAWA strongly believes that the costs associated with meeting nutrient standards developed this way are not scientifically defensible and would be an unnecessary burden to the citizens of Illinois who pay the user charges assessed by our member wastewater agencies. There must be a benefit to justify the cost.

Thank you for the opportunity to submit these comments.

Very truly yours,

ILLINOIS ASSOCIATION OF WASTEWATER AGENCIES

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