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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SEP 08 2004

INTERIM PHOSPHORUS EFFLUENT)
STANDARD, PROPOSED 35 ILL. ADM.)
CODE 304.123(G-K))
)

R2004-026
Rulemaking – Water

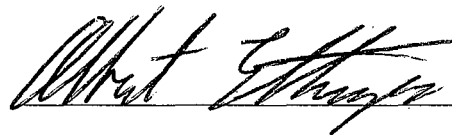
STATE OF ILLINOIS
Pollution Control Board

PC #1

NOTICE OF FILING OF COMMENT OF PROFESSOR WALTER K. DODDS

PLEASE TAKE NOTICE that the Environmental Law & Policy Center has filed the attached COMMENT OF PROFESSOR WALTER K. DODDS in support of the proposal submitted by the Illinois Environmental Protection Agency.

After the Agency filed its proposal, Professor Dodds, who has actively worked on problems relating to nutrient pollution and the development of nutrient standards, was asked for his views regarding the proposal. It is not currently anticipated that Professor Dodds will testify but his views are hereby submitted as comment to assist the Board.



Albert F. Ettinger (Reg. No. 3125045)
Counsel for Environmental Law & Policy
Center, Prairie Rivers Network, and Sierra
Club

DATED: September 8, 2004

Environmental Law & Policy Center
35 East Wacker Drive, Suite 1300
Chicago, IL 60601
312-795-3707

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STATE OF ILLINOIS
Pollution Control Board

July 6, 2004

Albert F. Ettinger
Environmental Law & Policy Center
35 East Wacker Drive, Suite 1300
Chicago, IL 60601

Re: Proposed Phosphorus Effluent Limit for Certain New or Expanded Plants

Dear Mr. Ettinger:

This letter is in response to your request to evaluate the Illinois Environmental Protection Agency's proposed effluent regulation that is now before the Illinois Pollution Control Board (R04-026). My qualifications to make this evaluation are based on my experience in researching nutrient criteria in rivers and streams and eutrophication. This experience includes numerous publications in the peer-reviewed scientific literature, participation in the U.S. EPA's production of the Nutrient Criteria Technical Guidance Manual, Rivers and Streams (EPA-822-B-00-002) and participation as a scientific advisory member of the U.S. EPA region 7 RTAG group to guide determination of nutrient criteria. My recommendations are based on a general expertise in aquatic ecology, not the specifics of Illinois regulations. The fact is that any control of phosphorus would be beneficial. The proposed regulation is a reasonable first policy step for the following reasons:

1. Phosphorus is a major problem in many Midwest lakes, rivers and streams. Phosphorus can fertilize excessive growth (blooms) of algae, including cyanobacteria. These blooms are occasionally toxic to humans, and can cause taste and odor problems in water supplies. The blooms can also render water unfit for swimming and other recreation. Finally, scientific studies have demonstrated that nutrient pollution can harm biotic integrity.
2. Algal blooms can cause supersaturating levels of dissolved oxygen during daylight hours followed by severe dissolved oxygen depletion at night and in early morning. Low dissolved oxygen concentrations can kill fish, mussels, and other aquatic life and prevent breeding and juvenile development in these species.

My work and that of many other scientists indicates that these two types of problems are common in lakes above approximately 0.03 mg/L total phosphorus and 0.4 ml/L total nitrogen. Most systems that are only moderately impacted by human nutrient pollution have concentrations that are less than these levels. Even when ecoregional differences are accounted for, reference concentrations of nutrients for the ecoregions in Illinois will likely be at or below 0.03 mg/L total phosphorus and 0.4 ml/L total nitrogen (Smith et al. 2003 *Env. Sci. Technol.* 37: 2039-3047, Dodds and Oakes in press *Limnol. Oceanogr. Methods*). While the current U. S. EPA recommended standard is 0.1mg/L for total phosphorus, it is likely that nutrient levels will be set at

concentrations substantially less than 0.1 mg/L given the scientific information available.

The actual impact of a limit on new or expanded discharges set at 1.0 mg/L will depend on the daily loading (i.e. the discharge of effluent relative to the throughput of the receiving water body). Adoption of a 1.0 mg/L effluent limit is a first step that would lower current phosphorus loading, encourage construction of treatment plants with the option of phosphorus control, and encourage bans on phosphorus-containing detergents. Such an effluent limit is within the technological capabilities that are currently available, and has been attained in many areas draining into the Great Lakes.

If you would like more information on my scientific qualifications, a copy of my curriculum vitae and publications can be found at <http://www.ksu.edu/doddsfab>. If you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Walter Dodds".

Walter K. Dodds
Professor of Biology
Kansas State University

CERTIFICATE OF SERVICE

I, Albert F. Ettinger, certify that on September 8, 2004, I filed the attached COMMENT OF PROFESSOR WALTER K. DODDS. An original and 9 copies was filed, on recycled paper, with the Illinois Pollution Control Board, James R. Thompson Center, 100 West Randolph, Suite 11-500, Chicago, IL 60601, and copies were served via United States Mail to those individuals on the included service list.

A handwritten signature in cursive script, reading "Albert F. Ettinger", is written over a horizontal line.

Albert F. Ettinger (Reg. No. 3125045)
Counsel for Environmental Law & Policy
Center, Prairie Rivers Network, and Sierra
Club

DATED: September 8, 2004

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