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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

AUG 04 2005

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO)
DISSOLVED OXYGEN STANDARD)
35 Ill. Adm. Code 302.206)

R 04-25

STATE OF ILLINOIS
Pollution Control Board

NOTICE OF FILING COMMENTS

**TO: DOROTHY GUNN , CLERK
ILLINOIS POLLUTION CONTROL BOARD
100 WEST RANDOLPH ST, SUITE 11-500
CHICAGO, IL 60601**

Respectfully submitted,

FRIENDS OF THE CHICAGO RIVER

BY: _____



TODD MAIN
Director of Policy and Planning
407 S. Dearborn, Suite 1580
Chicago, IL 60605

In April of 2004, The Illinois Association of Wastewater Agencies (IAWA) submitted a proposal to the Illinois Pollution Control Board proposing to amend the Board's rule establishing general use water quality standards for dissolved oxygen in Illinois rivers.

Friends of the Chicago River has serious and substantive reservations about this proposal, and urges that the Illinois Pollution Control Board reject this proposed rulemaking until further study and sound science establish that the reduction of dissolved oxygen levels will not harm aquatic life in the Chicago River and in Illinois surface waters.

The Chicago River is by its history and hydrology a unique river system in Illinois. We understand that given its history it faces many unique challenges; however the river in recent years has made remarkable progress in its ability to support an increasing variety of fish species and other wildlife. It is also becoming a significant economic resource as its improving condition translates into increasing utilization for public recreation and as adjacent properties increase in value. Our general concerns with the proposed rulemaking are that if we lower dissolved oxygen standards for the river we are jeopardizing the progress that has already been achieved by significant public investment in structural storm water controls like the Tunnel and Reservoir Plan. We are also concerned that we will lose the significant future economic benefits for the region associated with a fishable and swimmable Chicago River.

We also have several specific concerns.

1. This rulemaking is premature given the Use Attainability Analysis currently underway.

Currently the IEPA is conducting a Use Attainability Analysis of the Chicago Waterway System to determine if upgraded water designations are appropriate. These new designations will replace the existing general use, and secondary contact and indigenous life use designations that are currently in place. The new proposed designations will upgrade existing standards and likely require increased monitoring for dissolved oxygen levels. After careful analysis of the data from this increased monitoring we will then have the opportunity to make a decision based on sound science as to the appropriate levels of dissolved oxygen in the Chicago River.

2. Dissolved oxygen levels in the Chicago River are dramatically impacted by combined sewer overflows. Lowering levels will artificially improve compliance but not improve the health of the river

In the North Shore Channel levels of dissolved oxygen fall below the 6 mg/l screening criteria over 50% of the time. Other stretches of the river fail to meet existing standards after a CSO event, and often take several days to recover. This problem is most severe in sections of bubbly creek, where monitors show that dissolved oxygen levels fall to zero for many consecutive days after a major CSO event.

3. We lack the data to properly evaluate the impact the proposed standards will have on the reproductive cycles of the freshwater mussels and late spawning fish.

For the past three years, Friends of the Chicago River in partnership with the Shedd Aquarium, has conducted a freshwater mussel survey in the Chicago River. Our survey has documented the presence of mussels in multiple locations of the Chicago river. Research has shown that Unionid mussels, which have been found in the North Branch of the Chicago River, are especially threatened because they require host fish for reproduction. Only about 25% of the host fish for the mussels in the US have been correctly identified, so it is difficult to predict the impacts human activity has, as clearly the diversity and health of fish populations within the river system will affect the reproductive success of these mollusk species.

Dissolved oxygen levels below 20% saturation can cause stress to freshwater mussels (Ellis 1937, Ingram 1957), although some species can withstand brief periods of low oxygen levels. Dissolved oxygen is one example of an environmental factor that affects all stages of the life cycle of Unionid Mussels (Chesney & Oliver, 1998). For example, Long term breeders spawn and fertilize eggs in late spring, summer or early fall producing mature glochidia by late fall or winter, however, the glochidia may not be released until spring or early summer of the following year. In contrast short term breeders spawn, fertilize eggs, develop and release glochidia from late spring to early fall (Howells et al., 1996). It is difficult to accurately determine when low dissolved oxygen levels would be safe, because the reproduction of the species is sensitive at various stages.

In order to protect the current populations and ensure their survival and reproduction, we need to ensure that the entire Chicago River system can provide habitat to support their complex and sensitive life cycle. Freshwater mussels are especially vulnerable to habitat disturbance. Of the 80 mussel species native to Illinois, more than half are currently threatened, endangered, extirpated, or extinct.

In addition, the negative effects of low dissolved oxygen levels on fish have been well documented. At extremely low oxygen levels fish kills result. Low dissolved oxygen levels in the Chicago River will also negatively impact fish species that spawn in late summer like sunfish, and sport fish such as smallmouth bass which are sensitive to low dissolved oxygen levels. The loss of fish hosts as well as habitat destruction from dams and pollution are identified as some of the principal causes for mussel population declines.

4. The current standards are working.

Under the current regulatory standards, the health of the Chicago River has dramatically improved as evidenced by its ability to support an increasing variety of fish species and wildlife. Yet even with these improvements many sections of the North Shore Channel fail to meet current 8 hour standard 50% of the time. Monitoring data from 1998-2002 show that with the exception of the downtown portion that receives a diversion of Lake Michigan Water (Main stem Chicago River), the river did not meet the current eight-hour standard at least 50% of the time, and in the South Fork 76% of the time.

We find it hard to understand the rationale for the proposed rulemaking. It seems to us that given the progress Chicago has made restoring the health of the river, by forging a unique and committed civic partnership between political leaders, the MWRD, citizen groups, and others we should not be lowering standards, but rather gathering our collective resolve to finish the task and apply proven techniques and strategies that will improve dissolved oxygen levels in the river.

The mission of Friends of the Chicago River is to foster the vitality of the Chicago River for the plant, animal, and human communities within its watershed. The aquatic fauna in the Chicago River is already threatened by deteriorating water quality and increased development with several species becoming extirpated from the watershed in recent decades. Reducing the standards for dissolved oxygen will only help to make this problem worse, threatening our valued aquatic fauna.