

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF: )  
 )  
WATER QUALITY STANDARDS AND ) R08-9  
EFFLUENT LIMITATIONS FOR THE ) (Rulemaking - Water)  
CHICAGO AREA WATERWAY SYSTEM )  
AND THE LOWER DES PLAINES RIVER: )  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code Parts 301, 302, 303 and 304 )

**NOTICE OF FILING**

To: ALL COUNSEL OF RECORD  
(Service List Attached)

**PLEASE TAKE NOTICE** that on the 8<sup>th</sup> day of March, 2010, I electronically filed with the Office of the Clerk of the Illinois Pollution Control Board, **Metropolitan Water Reclamation District of Greater Chicago's Response in Opposition to Motion of Environmental Groups to Sever, Open Subdocket, and Proceed to Decision Concerning Recreational Use Issues, and Motion for a Hearing on Technical Report and Final UIC Epidemiological Study.**

Dated: March 8, 2010.

**METROPOLITAN WATER RECLAMATION  
DISTRICT OF GREATER CHICAGO**

By: /s/ Fredric P. Andes  
One of Its Attorneys

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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO'S  
RESPONSE IN OPPOSITION TO MOTION OF ENVIRONMENTAL GROUPS TO  
SEVER, OPEN SUBDOCKET, AND PROCEED TO DECISION CONCERNING  
RECREATIONAL USE ISSUES, AND MOTION FOR HEARING ON TECHNICAL  
REPORT AND FINAL UIC EPIDEMIOLOGICAL STUDY**

The Metropolitan Water Reclamation District of Greater Chicago (the "District"), by its attorneys Barnes & Thornburg LLP, hereby submits its Response in Opposition to the Motion of Environmental Groups to Sever, Open Subdocket, and Proceed to Decision Concerning Recreational Use issues. In conjunction with its Opposition, the District also moves for an Order setting an optional hearing related to the technical report for the UIC epidemiological study that will be issued by May 5, 2010, and a hearing on the final epidemiological study that will be issued by September 15, 2010. In support of its Response and Motion, the District states as follows:

**INTRODUCTION**

In essence, the Environmental Groups have moved to end the Pollution Control Board's hearings and inquiries regarding the IEPA's proposed Chicago Area Waterway System ("CAWS") recreational use designations because, as they argue, the use designations "are now ripe for decision." Mot., at 1. The Environmental Groups characterization of the use designations being ripe for decision, however, ignores the facts of this rulemaking. The District has repeatedly stated to the Board that the epidemiological study being conducted by the

University of Illinois at Chicago (“UIC”) and Dr. Samuel Dorevitch is essential for the Board’s consideration of recreational use issues. Specifically, the groundbreaking epidemiological study is “the first epidemiological study of the health risks of fishing, boating, rowing and paddling” and involves “[a] panel of recognized leaders in the fields of water microbiology and health from the U.S. Centers for Disease Control and Prevention, the U.S. Environmental Protection Agency, and other universities [that] has reviewed and endorsed the design and protocols of the research, and continues to monitor the quality of data collected.” Pre-Filed Testimony of Samuel Dorevitch, at 4-5, filed August 4, 2008, attached as Exhibit A. The epidemiological study is critical to the Board’s consideration of recreational use issues, as “[e]pidemiological studies provide an opportunity to directly measure, rather than model, risk. For this reason the U.S. EPA places considerable weight on epidemiological studies when establishing environmental standards.” *Id.* at 6.

As with any epidemiological study, it has taken several years for Dr. Dorevitch and his staff at UIC to collect and analyze extensive data for the study, and the District has kept the Board apprised of the status of the study from the beginning of this rulemaking. After proceeding through this rulemaking for two-and-a-half-years, however, the Environmental Groups now want to move to a final decision on the recreational issues without allowing the District to file the epidemiological study for the Board’s consideration. The District will be filing technical reports by May 5, 2010 that will eventually form the basis for the study’s conclusions, and the epidemiological report itself will be filed by September 15, 2010.<sup>1</sup> It would be nonsensical for the Board now to proceed to a final decision when the seminal study is only months away from being completed, finalized, and filed with the Board. Indeed, the Board and

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<sup>1</sup> The final report will be filed with the Board no later than September 15, and will be filed before that date if possible.

the parties have recognized throughout the rulemaking that the epidemiological study is relevant to the Board's consideration of recreational use issues.

As noted above, detailed technical reports supporting the epidemiological study will be filed by May 5, 2010. Those reports will provide ample information for the Board and the parties to review and analyze over the next few months, while testimony and hearings continue on aquatic issues. If the Board so desires, the District would be glad to make witnesses available to answer questions from the Board and the parties regarding that report. Then, the final study report will be filed by September 15, 2010. Consistent with the procedures taken by the Board throughout this rulemaking, the Board should set a schedule for the filing of written testimony and questions regarding that report, and set a hearing. Such a procedure is consistent with the Board's holding that the District, as well as any party, should be allowed to present fully its studies and witnesses related to their studies. *See* Board Order, July 21, 2008, at 11, attached as Exhibit B ("The hearing process and information gathering by the Board will continue at least until the Board has heard testimony from all participants who wish to testify on all aspects of the IEPA's proposal. Additional testimony will provide a more complete record and enable the Board to make the best decisions regarding the IEPA's proposed rules.")

Given that the District will be submitting the technical reports by May 5, 2010 (with witnesses available for questioning if necessary) and the complete epidemiological study by September 15, 2010, and then hearings would be held to address the final epidemiological study, the Environmental Groups are wrong that the recreational use designations are ripe for a decision.<sup>2</sup> As a result, it simply does not make sense, and is not "in the interest of convenient,

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<sup>2</sup> In addition, in the interim before September 15, 2010 when the District will file the epidemiological study, the Board should conduct a hearing on the Habitat Reports submitted by the District and the District's proposed aquatic life use designations and standards, as is the subject of the District's Motion for a Hearing that is filed concurrently with this Response.

expeditious, and complete determination of claims” (35 Ill. Adm. Code §101.408), to create a subdocket and proceed with a decision on recreational use issues. The Environmental Groups’ Motion should be denied.

In addition, the recreational use issues are not ripe for a decision by the Board because of ongoing discussions amongst multiple levels of federal and state government regarding measures to prevent the migration of Asian carp in the Chicago Sanitary and Ship Canal (the “Ship Canal”) and other parts of the CAWS. The Board is currently considering a Motion filed by Citgo Petroleum Corporation (“Citgo”) and PDV Midwest, LLC (“PDV”), to hold a hearing regarding the impact of the litigation related to the migration of the Asian carp. Since the filing of that Motion, numerous federal and state governmental agencies have engaged in ongoing and rapidly evolving discussions about how to prevent the migration of Asian carp. The major preventative measures that are being considered include, but are not limited to, “kill zones”, poisons, electrical barriers, lowering of water quality (as proposed by the Army Corp. of Engineers), reducing diversions, and closing navigational locks. See <[www.asiancarp.org](http://www.asiancarp.org)> (last visited March 4, 2010). Any of these measures, if implemented to stop the migration of Asian carp, will directly bear on the Board’s consideration of recreational use designations. Until there is a resolution for implementing preventative measures for the migration of Asian carp, or at the very least, the Board conducts a hearing on the Asian carp issue, the recreational use issues are not ripe for a decision. The Environmental Groups’ Motion should be denied.

Finally, the District moves for an Order from the Board that allows for a hearing opportunity related to the technical reports for the epidemiology study and enters a hearing schedule for the final epidemiology study. The District will be submitting technical reports for the UIC epidemiological study by May 5, 2010. The technical reports will include the following

information that will be used for the final epidemiological study: (a) Water Quality Data Summary; (b) Clinical Microbiological Summary (pathogen content of stool samples); (c) Final recruitment statistics; (d) Overall incidence of illness data; and (e) Water Exposure Study final report. After it files the technical reports, the District will make its witnesses associated with the technical reports available for a hearing should the Board or any of the parties want to raise questions about the report. Subsequently, by September 15, 2010, the District will submit the final epidemiological report. The Board should set a schedule related to that report, which would include setting deadlines for the filing of written testimony (October 15, 2010) and pre-filed questions (November 15, 2010), and then setting a hearing date soon after the filing of questions.

### **ARGUMENT**

The Board's rules provide the mechanism for severing claims:

Upon motion of any party or on the Board's own motion, in the interest of convenient, expeditious, and complete determination of claims, and where no material prejudice will be caused, the Board may sever claims involving any number of parties.

35 Ill. Adm. Code § 101.408. The Board, however, will not sever claims when severance would not further the convenient, expeditious, and complete determination of the claims. *See People v. Union Pac. R&R Co.*, PCB No. 08-07, 2009 Ill. ENV LEXIS 321, \*17 (Aug. 20, 2009); *People v. Community Landfill Co., Inc.*, PCB No. 03-191, 2007 Ill. ENV LEXIS 104, \*8 (Mar. 15, 2007) (“[S]evering the respondents’ claims would not result in a convenient, expeditious and complete determination of claims.”).

Under the standards set forth in section 101.408, the Environmental Groups’ Motion should be denied because the recreational use issues are not ripe for a Board decision, and, thus, the opening of a separate subdocket would be pointless. First, the recreational use issues are not ready for a decision by the Board because the Board needs to consider and hold hearings on the

UIC epidemiological study to be finalized and issued by September 15, 2010. Throughout this rulemaking, the District has repeatedly stated that the epidemiological study being conducted by Dr. Samuel Dorevitch is critical to the Board's consideration of recreational use issues. The Environmental Groups' experts have repeatedly recognized the relevance of the study. Second, the recreational use issues are not ripe for review by the Board because of the numerous preventative measures that are being considered by governmental agencies at federal and state levels for addressing the migration of Asian carp in the Ship Canal and portions of the CAWS. The implementation of any of the measures being considered will have an impact on the Board's consideration of recreational use issues. Thus, the recreational use issues are not ripe for a final decision by the Board, and the Board should deny the Environmental Groups' request to sever and proceed to a final decision.

**A. The Board needs to consider the final and complete UIC epidemiological study before deciding the recreational use issues.**

**1. The District has repeatedly informed the Board and parties about the status and importance of the UIC epidemiological study.**

Throughout this rulemaking, the District has stated that the UIC epidemiological study that will be issued this year is critical to the Board's consideration and decision on the recreational use designations. On June 12, 2008, the District filed a Motion to Stay IPCB R08-9 based on the fact that multiple major studies were being conducted which would affect the Board's consideration and analysis of IEPA's proposed water quality standards for the CAWS. In that Motion, the District stated as to the ongoing studies addressing recreational use issues:

Currently, there is an ongoing epidemiological study of recreational contamination in the CAWS, which is intended to validate the results of the quantitative microbial risk assessment, to provide scientific data necessary to properly evaluate the actual risk of illness, and to provide scientific data on the risk of illness in correlation to indicator bacteria concentrations. The study has

undergone and been approved through the peer review process, and it is scheduled for completion in early 2010.

Mot. to Stay, at 10 (Jun. 12, 2008). The District also provided that the basis of its Motion to Stay was that “[t]he studies that are set forth above would be very helpful in filling those gaps, and in helping the Board to form an adequate scientific basis for its decisions.” *Id.* at 14.

While the Board denied the District’s request for a stay, it found that the District, as well as any party, should be allowed to fully present its studies and witnesses related to the studies. Ex. B, Board Order, July 21, 2008, at 11 (“The hearing process and information gathering by the Board will continue at least until the Board has heard testimony from all participants who wish to testify on all aspects of the IEPA’s proposal. Additional testimony will provide a more complete record and enable the Board to make the best decisions regarding the IEPA’s proposed rules.”). Based on the July 21, 2008 ruling, it is apparent that the Board found that the District is allowed to present the final UIC epidemiological study, as well as testimony from witnesses involved with the study, before the Board can make a final decision on recreational use issues.

As the rulemaking continued, the District informed the Board about the status of the epidemiological study, and the District’s witnesses testified to the critical value it will have on the Board’s consideration of the recreational designated uses. Specifically, Dr. Samuel Dorevitch, who is “directing the epidemiologic study of CAWS recreation know as CHEERS, which stands for the Chicago Health, Environmental Exposure, and Recreation Study,” explained in his testimony that “[b]ecause epidemiologic studies involve the direct measurement, rather than the statistical modeling of risk, they are of great importance in developing plans to protect the health of the public.” Pre-Filed Testimony of Samuel Dorevitch, at 4, filed August 4, 2008, attached as Exhibit A.; *see also id.* at 6 (“Epidemiologic studies provide an opportunity to directly measure, rather than model, risk. For this reason the U.S. EPA places considerable

weight on epidemiologic studies when establishing environmental standards.”). Dorevitch then described the epidemiological study for the CAWS and the analyses it will provide:

This is the first epidemiologic study of the health risks of fishing, boating, rowing and paddling. This research uses the gold standard of observational epidemiologic studies, the prospective cohort design, and has been developed by a multi-disciplinary team of experienced researchers, with backgrounds in infectious disease medicine, environmental medicine, epidemiology, biostatistics, industrial hygiene and environmental science. A panel of recognized leaders in the fields of water microbiology and health from the U.S. Centers for Disease Control and Prevention, the U.S. Environmental Protection Agency, and other universities has reviewed and endorsed the design and protocols of the research, and continues to monitor the quality of data collected.

*Id.* at 4-5. Dorevitch then provided details as to the data collection and analyses that are involved with the epidemiological study of the CAWS. *Id.* at 5-6. Dorevitch then concluded as to why the epidemiological study is critical for determining risk and assessing recreational use issues:

The result of those analyses will provide answers to the critical questions about risk, the determinants of risk, exposure, sources of microbes, and causes of illness. The final report will serve as the basis for establishing standards to protect limited contact uses.

*Id.* at 8. Dorevitch also testified as to why the epidemiological study is not yet finalized and needs to be completed to fully verify its conclusions:

Preliminary analysis of the 2007 data identifies no difference in rates of gastrointestinal symptoms among recreators in the three study groups. Because that analysis involved less than 10% of the total number of participants who will have been enrolled at the completion of this research, firm conclusions are premature. However, consistent with the lack of reports by public health departments of outbreaks of disease linked to CAWS recreation, our preliminary observations suggest no danger to the health of the population of limited contact recreators on the CAWS.

*Id.* at 8; *see also id.* at 9 (“The UIC School of Public Health research team is well on the way to defining the risk that limited contact recreators face under current wastewater management

practices. I believe that this research should be the basis for sound, science-based environmental policy.”).

In response to Dr. Dorevitch’s testimony, the Environmental Groups’ experts consistently found that the epidemiological study will be relevant to the Board’s consideration of recreational issues. For example, Dr. Peter Orris, the Chief of Service for Occupational and Environmental Medicine at UIC Hospital, who is a witness for the Environmental Groups, testified repeatedly as to the relevance of the epidemiological study and the high quality of the study being conducted by Dr. Dorevitch:

- “Certainly, epidemiological studies are helpful and these studies should help as one piece of evidence guiding your approach to understanding what risks and benefits there are from your decisions.” April 15, 2009 Hearing Trans., at 8-9, attached as Exhibit C.
- “Otherwise, called how large is a false negative or whatever and by convention and with respect to **this quite excellent study that Dr. Dorevitch is projecting**, the standard that we set is based on our preconceived, at priority judgments that we hope that the power will be 80 percent.” Ex. C, April 15, 2009 Hearing Trans., at 9-10 (emphasis added).
- “It doesn’t mean it’s a bad study. It’s an excellent study. We support that study. We support this further review. It may demonstrate despite those problems, things we need to look at with respect to those waterways and what ought to be done about it, but it is only one piece of the overall puzzle.” Ex. C, April 15, 2009 Hearing Trans., at 11-12.
- “MR. ANDES: And you’re aware that in this record in addition to the epidemiological study which has been discussed in Dr. Dorevitch’s testimony and will be available early next year there has been risk assessment information and other information provided to the Board all which I imagine you think should be considered in considering the totality of the information?

MR. ORRIS: Certainly.” Ex. C, April 15, 2009 Hearing Trans., at 15

- “MR. ANDES: In fact, the CHEER study is specifically looking at the exposure that people are undergoing on the CAWS system, correct?

MR. ORRIS: Yes, absolutely.” Ex. C, April 15, 2009 Hearing Trans., at 17.

- “MR. ANDES: Dr. Orris, is any one here suggesting or has said in writing that this should be the sole basis for the decision by the Board.

MR. ORRIS: What I take to be the question I’m asked is should the Board rely on the CHEER study as the basis for making their regulatory decision within this situation and that is what I am specifically talking about. In fact, when I read my colleague, Dr. Dorevitch’s excellent testimony about his – I want to say again, his excellent study. . . . reading his last line within his system and perhaps this was overstated unintentionally, but he does say this is the – that this should be the basis for consideration here. ‘The’ is the word I take issue with.

MR. ANDES: Your --

MR. ORRIS: **It should certainly be a basis.**” Ex. C, April 15, 2009 Hearing Trans., at 21-22 (emphasis added).

- “MR. ANDES: As to the CAWS itself, I gather we’ll have a better sense through the questions in the CHEERS study as to what extent those precautions have affected people’s habits, correct?

MR. ORRIS: Again, this goes over what we previously talked about with respect to the study. **We may learn some very important thing from that study about the water use, et cetera.**” Ex. C, April 15, 2009 Hearing Trans., at 33 (emphasis added).

- “MR. ANDES: . . . Dr. Orris, when you reviewed the CHEER study as an excellent study, you’re aware, are you not, that the research plan was evaluated by a panel of recognized leaders in the field and they determined the study, quote, has been designed to provide information that is valuable in the area of health risks associated with secondary contact recreation and addressed potential deficits in the current knowledge and health risks associated with limited contact water recreation and the measures acquired to protect the public?

MR. ORRIS: Yes, I absolutely agree.” Ex. C, April 15, 2009 Hearing Trans., at 48-49.

The Environmental Groups' expert Dr. Marc Gorelick, a Professor of Pediatrics and Population Health and Chief of the Section on Emergency Medicine at the Medical College of Wisconsin, also confirmed the relevance of the Board's consideration of the UIC epidemiological study:

"I think that's actually one of the nice strengths of the CHEER study is – that it is another study that is attempting to look at this in a way that identifies prospective diseases that may not occur in outbreaks. Like some of the other surveys that have already been done in other settings that have shown there is an increased risk. None out of this reported outbreaks. They were done through prospective surveillance. We need more of that kind of prospective surveillance to add to the existing body that shows that there are risks associated with that and to try to quantify it."

Ex. D, April 15, 2009 Hearing Trans., at 87.

The Environmental Groups' expert Dr. Marilyn Yates, who is a Professor of Environmental Microbiology at the University of California, Riverside, also confirmed the relevance of the UIC epidemiological study to the Board's consideration of the recreational issues:

- "Q. And the epidemiological study being done as to the CAWS, which is the first one being done as to secondary contact, you would agree that that would as well be relevant in determining appropriate water quality standards for the CAWS?

A. **I would say that the epidemiological study that's being conducted by Dr. Gorovich [sic] would certainly be one piece of information that would be relevant to consider when determining what happens with respect to the issues at hand here.**" May 5, 2009 Hearing Trans., at 54, attached as Exhibit E (emphasis added).

- "MR. ANDES: The epidemiological study, the CHEERS study that's going on now will give us a better idea of that answer?

DR. YATES: That's my understanding, yes.

MR. ANDES: So that would also be information that the Board would want to consider in making a decision here?

DR. YATES: **I would imagine that the Board would consider the information, yes.**” Ex. E, May 5, 2009 Hearing Trans., at 143 (emphasis added).

- “Q. Question three asks, in your opinion, why is MWRDGC’s epidemiological study not a sufficient tool to assess the needs for disinfection?

A. First, let me say that I believe that the epidemiological study in general is being conducted in a very thorough way and **I have absolutely no reason to doubt that the information that comes out of that study will be extremely useful especially as it relates to the secondary recreational activities.**” July 28, 2009 Hearing Trans., at 60, attached as Exhibit E.

Even more so than Dr. Dorevitch’s testimony, the testimony of Drs. Orris, Gorelick, and Yates, who were testifying on behalf of the Environmental Groups, shows that the Board should consider the epidemiological study, and the technical report that will soon be issued in support of the final study. Because the experts agree that the Board should consider and analyze the final epidemiological study that will be issued later this year, the Environmental Groups’ Motion should be denied because the recreational use issues are not ripe for a final decision.

**2. The Board needs to review the final UIC epidemiological study before the recreational use issues will be ripe for a final decision.**

Given that the District and Dr. Dorevitch have repeatedly stated to the Board that the epidemiological study will provide the Board with critical information related to IEPA’s proposed recreational use designations, and that the Environmental Groups’ experts have testified that the final epidemiological study is relevant and should be considered by the Board, it is disingenuous for the Environmental Groups, or any party, to now say that the epidemiological study should be ignored completely and the recreational issues should proceed to a final decision. Instead, in order for the District to fully present its data and witnesses in this rulemaking, the Board should allow the District to file the technical reports for the epidemiological study when they are finalized by May 5, 2010. Subsequently, by September 15,

2010, the District will file the final and complete epidemiological study, and the Board can set a schedule for the submission of written testimony, responsive questions, and a hearing. Because the District is entitled to submit the technical reports and the final epidemiological study and present witnesses in support of the reports and study, it is pointless for the Board to sever the recreational use issues and create a subdocket under 35 Ill. Adm. Code § 101.408. The Environmental Groups are wrong in characterizing that “[a]ll testimony concerning recreational use has now concluded; . . .” Mot., at 2.

Anticipating that the District will file the epidemiological study later this year, and that the future filing of the study undermines their claim that the recreational use issues are ripe for a decision by the Board, the Environmental Groups argue presumptively that the epidemiological study can be ignored because “IEPA has appropriately determined that these studies are not necessary to support its basic, and rather obvious, conclusion that disinfection is appropriate to reduce public exposure to sewage-related pathogens . . .” Mot., at 9. The Environmental Groups then list out testimony from Drs. Orris and Gorelick to attempt to invalidate the epidemiological study before it has even been completed.

But the Environmental Groups’ arguments are undermined by their own experts’ testimony. As provided above, the Environmental Groups’ experts Drs. Orris, Gorelick, and Yates have specifically testified that the Board should consider the epidemiology study. *See e.g.*, Ex. C, April 15, 2009 Hearing Trans, at 8-9, testimony of Dr. Orris (“Certainly, epidemiological studies are helpful and these studies should help as one piece of evidence guiding your approach to understanding what risks and benefits there are from your decisions.”); Ex. D, April 15, 2009 Hearing Trans., at 87, testimony of Dr. Gorelick (“I think that’s actually one of the nice strengths of the CHEER study is – that it is another study that is attempting to look at this in a way that

identifies prospective diseases that may not occur in outbreaks. Like some of the other surveys that have already been done in other settings that have shown there is an increased risk. None out of this reported outbreaks.”); Ex. E, July 28, 2009 Hearing Trans., at 60, testimony of Dr. Yates (“First, let me say that I believe that the epidemiological study in general is being conducted in a very thorough way and **I have absolutely no reason to doubt that the information that comes out of that study will be extremely useful especially as it relates to the secondary recreational activities.**”) (emphasis added). Thus, the Environmental Groups’ own experts’ testimony undermines the Groups’ argument that the epidemiological study should be ignored by the Board and the recreational use issues should proceed for a final decision by the Board.

Moreover, the Environmental Groups’ argument that the epidemiological study can be ignored improperly pre-judges the study and presumes that the Environmental Groups’ experts are right without considering the counter-testimony that the epidemiological study is critical to the Board’s decision on the recreational use issues. In other words, based on their claim that the epidemiological study does not bear on the recreational use issues, the Environmental Groups then request that the Board simply ignore the study and not weigh the testimony from Dr. Dorevitch that the epidemiological study is vitally important in assessing recreational uses. Ex. A, at 8-9. But the Board cannot simply disregard the testimony about the importance of the epidemiological study, as Dr. Dorevitch has testified regarding the study that “[t]he results of those analyses [in the epidemiological study] will provide answers to the critical questions about risk, the determinants of risk, exposure, sources of microbes, and causes of illness. The final report will serve as the basis for establishing standards to protect limited contact uses.” Ex. A, at 8. Because the District presented the testimony of Dr. Dorevitch that shows the critical

importance of the epidemiological study (which may conflict with the Environmental Groups' expert's testimony), the District is entitled to file the study and have the Board consider the information contained in it. *Cf. Dienstag v. Margolies*, 919 N.E.2d 17, 28 (Ill. App. 2009) ("[T]he lengthy trial record shows that both parties offered conflicting expert testimony relating to the proper standard of care and defendant's alleged breach thereof. The conflicting testimony was sufficient to raise a question of fact to be decided by the jury . . .")

In essence, the Environmental Groups want the Board to preemptively strike the epidemiological study before it has even been finalized and submitted. Just like any party in this rulemaking, the District is entitled to submit all information that is relevant to the recreational use issues, and "the Board will continue at least until the Board has heard testimony from all participants who wish to testify on all aspects of the IEPA's proposal." Ex. B, Order, July 21, 2008, at 11. Despite the Environmental Groups' arguments, the epidemiological study is clearly relevant, as Dr. Dorevitch and the Environmental Groups' experts have testified. Accordingly, the District is entitled to file the final UIC epidemiological study later this year, and the Environmental Groups' request to proceed to a final decision is premature and should be denied.

**B. The Board needs to consider the potential preventative measures being considered for stopping the migration of Asian carp before deciding the recreational use issues.**

The Environmental Groups' Motion should also be denied because it is premature to submit the recreational use issues to the Board given the potential preventative measures that may be implemented to address the migration of Asian carp in the Ship Canal and parts of the CAWS. As stated in Citgo's and PDV's Motion filed on January 7, 2010, "[r]ecent events have created a very unusual situation" with regard to the migration of Asian carp. Citgo's and PDV's Motion seeks a hearing "for the purposes of receiving information on the current 'uses' of the Ship Canal, how those uses might be changed by the recent litigation filed before the Supreme

Court, and to consider this information in managing this docket going forward.” Citgo and PDV Mot., at 1 (Jan. 7, 2010). Since the filing of Citgo’s and PDV’s Motion, multiple governmental agencies, including the White House, the U.S. Army Corp. of Engineers, multiple Great Lakes States, State environmental agencies, and the District have been considering and discussing various options for stopping the migration of Asian carp. During these discussions, which are ongoing and evolve on an almost daily basis, the various governmental entities have considered major preventative measures, such as implementing and using “kill zones”, poisons, electrical barriers, intentional lowering of water quality, reducing diversions, and closing navigational locks. *See* <[www.asiancarp.org](http://www.asiancarp.org)> (last visited March 4, 2010). Any one of these measures would have a major impact on recreational uses in the CAWS and should be considered by the Board before deciding the recreational use issues.<sup>3</sup> As a result, the Board needs to hold a hearing to assess the impact that these measures may have on recreational uses. Because such hearings are needed before the Board can make a final decision on recreational uses, the Environmental Groups’ are wrong that the recreational issues are ripe for a decision. The Environmental Groups’ Motion should be denied.

**C. The Board should enter an Order allowing a hearing opportunity as to the technical reports for the UIC epidemiological study that will be filed by the District by May 5, 2010, and setting a hearing schedule related to the final epidemiological study that will be filed by September 15, 2010.**

By May 5, 2010, the District will file the technical reports for the epidemiological study. After the District files the technical reports, the District will make available to the Board and the parties any witness associated with the reports. If the Board or any party wishes to question such witnesses, the District is willing to present witnesses to testify and answer questions at a hearing

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<sup>3</sup> For example, the attached article shows the significant impact that closing the navigational locks would have on the Chicago River boat traffic. Hood, Joel, “Asian Carp Fight May Close Chicago River,” Chicago Tribune (March 1, 2010), attached as Exhibit F.

related to the technical reports. As stated above, the technical reports will include the following information that will be used for the final epidemiological study: (a) Water Quality Data Summary; (b) Clinical Microbiological Summary (pathogen content of stool samples); (c) Final recruitment statistics; (d) Overall incidence of illness data; and (e) Water Exposure Study final report.

Subsequently, the District will submit the final epidemiological study by September 15, 2010. In order to address the issues involved with the final epidemiological study, the Board should enter an Order setting a schedule on the study once it is filed. Specifically, the Board should set the following dates for a hearing as to the final epidemiological study: (1) October 15, 2010 – deadline for filing written testimony related to the final UIC epidemiological study; (2) November 15, 2010 – deadline for filing pre-filed questions related to the final UIC epidemiological study; and (3) reasonably soon after November 15, 2010 – hearing related to the final UIC epidemiological study.

### **CONCLUSION**

For all of the foregoing reasons, the District requests that the Board deny the Environmental Groups' Motion to Sever, Open Subdocket, and Proceed to Decision Concerning Recreational Use Issues, and enter an Order that allows for a hearing opportunity related to the technical reports for the epidemiological study that will be filed by May 5, 2010, and setting the following schedule for a hearing on the final UIC epidemiological study that the District will file by September 15, 2010: (1) October 15, 2010 – deadline for filing written testimony related to the final UIC epidemiological study; (2) November 15, 2010 – deadline for filing pre-filed questions related to the final UIC epidemiological study; and (3) reasonably soon after November 15, 2010 – hearing related to the final UIC epidemiological study.

Dated: March 8, 2010

**METROPOLITAN WATER RECLAMATION  
DISTRICT OF GREATER CHICAGO**

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**PROOF OF SERVICE**

The undersigned, a non-attorney, certifies, under penalties of perjury pursuant to 735 ILCS 5/1-109, that I caused a copy of the forgoing, **Metropolitan Water Reclamation District of Greater Chicago's Response in Opposition to Motion of Environmental Groups to Sever, Open Subdocket, and Proceed to Decision Concerning Recreational Use Issues, and Motion for a Hearing on Technical Report and Final UIC Epidemiological Study**, to be served via First Class Mail, postage prepaid, from One North Wacker Drive, Chicago, Illinois, on the 8th day of March, 2010, upon the attorneys of record on the attached Service List.

*/s/ Barbara E. Szynalik* \_\_\_\_\_

Barbara E. Szynalik

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF: )  
)  
WATER QUALITY STANDARDS AND ) R08-9  
EFFLUENT LIMITATIONS FOR THE ) (Rulemaking - Water)  
CHICAGO AREA WATERWAY SYSTEM )  
AND THE LOWER DES PLAINES RIVER: )  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code Parts 301, 302, 303 and 304 )

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# **Exhibit A**

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
 )  
WATER QUALITY STANDARDS AND )  
EFFLUENT LIMITATIONS FOR THE ) R08-9  
CHICAGO AREA WATERWAY SYSTEM ) (Rulemaking - Water)  
AND THE LOWER DES PLAINES RIVER: )  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code Parts 301, 302, 303 and 304 )

**PRE-FILED TESTIMONY OF SAMUEL DOREVITCH**

My name is Samuel Dorevitch and I am an environmental health researcher at the University of Illinois at Chicago School of Public Health. I am a medical doctor, with training and board certification in Emergency Medicine and also in Preventive Medicine, with specialization in Occupational Medicine. Over the last six years, I've conducted research on local environmental health issues, such as the effects of public housing demolition and the reconstruction of the Dan Ryan expressway on air quality. In addition to being a scientist, I have been an advocate for reducing pollution and improving the environment. Over the years, I have testified at U.S. EPA hearings in favor of setting more stringent regulatory standards for ozone, particulate matter air pollution, and off-road diesel emissions. I have also spoken out in the media about the impact of coal-fired power plants on local air quality. I have added my name to the National Resources Defense Council's list of those opposed to the U.S. EPA's recent effort to stop regulating lead as an air pollutant.

I have advocated for tighter regulations in the above contexts because there is an overwhelming body of public health research that demonstrates negative consequences of air pollution. For ozone, particulate matter, lead and other air pollutants, a solid scientific foundation exists for setting a regulatory standard. Just as I support improvements in air quality as a means of promoting public health, I recognize the critical role that improvements in drinking

water quality have played in promoting the health of the public. The scientific basis for improving air quality and drinking water quality are well-established, strong, and based on thousands of scientific studies. However, in the case of water recreation, and limited contact recreation in particular, we are just beginning to develop the scientific data that will help define what regulatory measures are appropriate for protecting the health of public.

In contrast with the thousands of scientific papers that have addressed the health effects of air pollution, less than 20 observational epidemiologic studies of primary contact recreation in the US have been published. For limited contact recreation, no studies have been done in the US, less than 5 have been done in Europe, and those looked primarily at whitewater canoeing, an activity that does not take place on the Chicago Area Waterway System, or CAWS. No research has ever characterized the health risks of activities observed on the CAWS, namely boating, paddling, rowing and fishing. We do not know if people who engage in limited contact recreational activities develop illnesses, such as gastroenteritis or eye infections or skin infections or respiratory problems at higher risk than the general population.

Because the scientific literature does not provide guidance for establishing health-based regulations for CAWS recreation, one would want to know the following in developing efforts to improve water quality on the CAWS:

- Are rates of illness higher among CAWS recreators compared to recreators doing the same activities on waters that do not receive treated wastewater?
- If so, how frequently do such cases of illnesses occur above background rates?
- Are the pathogens responsible for illness bacteria, viruses or parasites, which may require different water quality treatment strategies?

- Are people who engage in specific recreational activities at increased risk while those who engage in other activities are not?
- Are there differences in risk on different CAWS reaches?
- How does the contribution of water reclamation plants to microbial measures of water quality compare to the contributions of runoff and sewer overflows?
- If the Pollution Control Board were to establish a disinfection requirement rather than a microbial water quality standard, how would risk to the public be determined along various CAWS reaches?
- Following rainfall and other events that are unrelated to wastewater treatment, what microbes should be measured in the water to evaluate and communicate risk to the public?
- If the Pollution Control Board were to establish a water quality standard, rather than a disinfection requirement, is there a microbial water quality level above which risk is unacceptable and below which risk is acceptable?

If there were known outbreaks of disease linked to CAWS recreation, I would suggest public health action now, rather than research. However, I am not aware of epidemics attributed to CAWS recreation. Since 1978, the U.S. Centers for Disease Control and Prevention has monitored disease outbreaks linked to water recreation. Using “WBD OSS,” the Waterborne Disease Outbreak Surveillance System, the CDC compiles information about outbreaks due to treated and untreated recreational waters. Hundreds of outbreaks and thousands of cases of illness have been identified, described, and in varying degrees, investigated over the years. Outbreaks from Illinois – including a recent outbreak of *Cryptosporidiosis* in Tazewell County – have been reported. To the best of my knowledge, local health departments, the Illinois

Department of Public Health, and the CDC have not identified outbreaks of disease attributed to CAWS recreation.

This does not mean that people haven't gotten sick after using the CAWS. It is possible that such cases fly beneath the radar of the public health monitoring system. That is why it is important to identify such cases, to determine the microbes responsible for illness, to evaluate the locations where water contact took place, to characterize the water quality at that location, and to estimate the frequency with which such illness occurs. The fact that outbreaks linked to CAWS recreation have not been identified does suggest that we have the opportunity to define the scope and specifics of the problem before developing a potential solution. This lack of known outbreaks of disease is consistent with the finding of the recent quantitative microbial risk assessment. That study used hundreds of measurements of water quality on the CAWS and estimated that rates of illness among limited contact recreators are about 1-2 cases per 1,000 uses.

Although risk assessment can be very useful in comparing various risk scenarios, such analyses do not involve direct measurement of risk in populations. That type of research – the study of the distribution and determinants of states of health and disease in population – is epidemiology. Because epidemiologic studies involve the direct measurement, rather than the statistical modeling of risk, they are of great importance in developing plans to protect the health of the public. I am directing the epidemiologic study of CAWS recreation known as CHEERS, which stands for the Chicago Health, Environmental Exposure, and Recreation Study. This is the first epidemiologic study of the health risks of fishing, boating, rowing and paddling. This research uses the gold standard of observational epidemiologic studies, the prospective cohort design, and has been developed by a multi-disciplinary team of experienced researchers, with

backgrounds in infectious disease medicine, environmental medicine, epidemiology, biostatistics, industrial hygiene and environmental science. A panel of recognized leaders in the fields of water microbiology and health from the U.S. Centers for Disease Control and Prevention, the U.S. Environmental Protection Agency, and other universities has reviewed and endorsed the design and protocols of the research, and continues to monitor the quality of data collected. A copy of the review panel's endorsement has been submitted by Mr. Daniel Woltering of the Water Environment Research Foundation and is Public Comment Number 63 in the docket for this rulemaking.

I would like to give you a broad brushstroke view of the CHEERS research. A copy of the epidemiologic study protocol has been submitted as an attachment to my written testimony for anyone who wishes to see the details of this research. We recruit people into one of three study groups. The CAWS Group is composed of people who row, paddle, fish or go boating on the CAWS. The General Use Waters Group consists of people who do these same activities on a number of area lakes, rivers and lagoons not including the CAWS. The Unexposed Group includes people who do outdoor activities that do not involve water (such as jogging or biking) at about the same time and about the same place as the recruitment of participants into the other two groups. Individuals in all three groups undergo interviews on the day of recreation, and then are contacted for three telephone interviews over the following three weeks. All interviews are conducted using computer assisted methods, which ensure that participants are asked the same questions in a neutral fashion. Field interviews address current health, and for those who engage in water recreation, the extent of their contact with the water. Telephone interviews address changes in health status and additional water exposure since recruitment. While the participants are on the water, samples of water are collected and sent for analyses of bacteria,

viruses and parasites. If a participant develops illness, clinical specimens are collected so that the pathogen responsible for illness may be identified. The study uses state-of-the-art methods, which in several respects, surpass the U.S. EPA's ongoing research about primary contact recreation known as the National Epidemiological and Environmental Assessment of Recreational Water (NEEAR) study.

Additionally, a module of CHEERS known as the exposure study seeks to answer important questions regarding water contact among recreators. Rowers, paddlers, boaters and fishers may be exposed to water microbes via several routes: ingestion, inhalation, and skin contact. Ingestion may result from getting water on ones hands and then touching ones mouth, it could result from a splash to the mouth, or it could occur in the unlikely event of capsizing or falling into the water. The exposure study will allow us to describe for the first time how much water exposure occurs by each route for specific recreational activities. These results may be useful in establishing whether some activities pose lower levels of risk (due to lower exposure) than others. We will also have the opportunity to evaluate the assumptions of risk assessments regarding exposure, dose, and risk. Preliminary analyses of 2007 data show that assumptions regarding the duration of various recreational activities were quite accurate. The conduct of an epidemiologic and a risk assessment in tandem is unusual and this opportunity to evaluate the strengths and limitations of risk assessment methods is one reason that there is considerable national interest in applying the final results of this research to the development of water quality regulation.

Epidemiologic studies provide an opportunity to directly measure, rather than model, risk. For this reason the U.S. EPA places considerable weight on epidemiologic studies when establishing environmental standards. A well-designed epidemiologic study seeks to minimize

the possibility that the research will fail to identify a real risk that may exist (a “false negative result”) and to minimize the possibility that a risk will be identified when none exists (a “false positive result”). Early in the development of CHEERS, the research team evaluated numerous approaches for minimizing the possibility of a false positive or a false negative result. In calculating our necessary number of study participants, we used typical values of a 1 in 20 chance of a false positive result and a 1 in 5 chance of a false negative result. We made numerous conservative assumptions in that sample size calculation, and it is becoming apparent that we will have more statistical power than originally anticipated because the rate of drop out by study participants is less than a third of the 15% we had projected. Thus, the chances of failing to identify a real risk are likely less than one in five.

We calculated that a total of 9,330 people should be enrolled in the three recreational categories (i.e. approximately 3,110 people per recreational category as described above). Last summer and fall – the first year of the study – over the first 800 participants signed up for the study. CHEERS has been scaled up substantially this summer, and for the months of May, June and July, an average of more than 1,000 participants were enrolled per month. A breakdown of recruitment by group, by month is included as an appendix to this testimony. By the date of this hearing, we project that 5,500 participants will have been enrolled in CHEERS. We collected data about use of the CAWS, for specific activities at specific locations. A summary of the findings of CAWS recreational use survey in 2007 has been submitted as an appendix to this testimony. Highlights of that summary include the observation that the dominant uses on the North Branch and North Shore Channel are rowing and paddling while the dominant use on the Cal-Sag Channel is motor boating. Fishing from shore is relatively uncommon, and jet skiing is rarer still. Swimming and water skiing were never observed. Data obtained from field

interviews of study participants demonstrates that several dozen individuals on rowing team each use the CAWS more 100 times per year. Similarly, some boaters at the Worth and Alsip launches use the Cal-Sag Channel dozens of times per season. Thus, a small number of users account for a large proportion of uses. These observations add detail to the picture sketched out by the assessment of current uses reported in the UAA. Inconsistencies between our observations and those of the UAA regarding the frequency of specific recreational activities and the distinction between uses and users are likely due to difference in methodologies.

Over 5,000 water samples have been analyzed and more than 150 stool samples have been obtained for analysis by the UIC laboratory and the Illinois Department of Public Health. We are well on our way to completing data collection and moving on to data analyses. The results of those analyses will provide answers to the critical questions about risk, the determinants of risk, exposure, sources of microbes, and causes of illness. The final report will serve as the basis for establishing standards to protect limited contact uses. Preliminary analysis of the 2007 data identifies no difference in rates of gastrointestinal symptoms among recreators in the three study groups. Because that analysis involved less than 10% of the total number of participants who will have been enrolled at the completion of this research, firm conclusions are premature. However, consistent with the lack of reports by public health departments of outbreaks of disease linked to CAWS recreation, our preliminary observations suggest no danger to the health of the population of limited contact recreators on the CAWS.

I favor strong, science-based environmental regulation as a means of protecting public health. Reducing the potential risks of limited contact recreation on the CAWS is an important and complex public health goal. From a policy perspective, one would want to know what the benefits and risks are of current wastewater management and recreation practices, and what the

benefits and risks are of various alternative approaches. The UIC School of Public Health research team is well on the way to defining the risks that limited contact recreators face under current wastewater management practices. I believe that this research should be the basis for sound, science-based environmental policy.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SD', with a long, sweeping horizontal line extending to the right.

By: Samuel Dorevitch, MD, MPH  
University of Illinois at Chicago  
School of Public Health

# **Exhibit B**

ILLINOIS POLLUTION CONTROL BOARD

July 21, 2008

IN THE MATTER OF: )  
)  
WATER QUALITY STANDARDS AND ) R08-9  
EFFLUENT LIMITATIONS FOR THE ) (Rulemaking - Water)  
CHICAGO AREA WATERWAY SYSTEM )  
AND LOWER DES PLAINES RIVER )  
PROPOSED AMENDMENTS TO 35 ILL. )  
ADM. CODE 301, 302, 303, and 304 )

ORDER OF THE BOARD (by G.T. Girard):

On June 12, 2008, the Metropolitan Water Reclamation District of Greater Chicago (District) filed a motion to stay the proceedings in this rulemaking (Motion). Between June 26 and June 30, 2008, the Board received seven responses to the Motion. Three of the responses supported the District, while four opposed the Motion. On July 11, 2008, the District filed a motion for leave to file a reply and a reply. The Board is cognizant of the concerns raised by the District and the other participants that support the motion. However, as discussed below, the Board is unconvinced that a stay of the proceeding is appropriate at this time. Therefore, the Board denies the Motion.

The discussion below will begin with a brief procedural history. Next the Board will summarize the motion and the filings that support the Motion. Then the Board will summarize the filings that oppose the motion. The Board will next summarize the reply. The Board will then explain the reasons for the decision.

**PROCEDURAL HISTORY**

On October 26, 2007, the Illinois Environmental Protection Agency (IEPA) filed a proposal under the general rulemaking provisions of Sections 27 and 28 of the Environmental Protection Act (Act) (415 ILCS 5/27, 28 (2006)). Generally, the proposal will amend the Board's rules for Secondary Contact and Indigenous Aquatic Life Uses to update the designated uses and criteria necessary to protect the existing uses of the Chicago Area Waterway System (CAWS) and the Lower Des Plaines River (LDPR). On November 1, 2007, the Board accepted the proposal for hearing. On November 1, 2007, the Board accepted the proposal for hearing.

Hearings were held in Chicago from January 28, 2008 through February 1, 2008 and on June 16, 2008. Hearings were then held in Joliet from March 10, 2008 through March 12, 2009. The Board also held hearings in Des Plaines on April 23, 2008 and April 24, 2008. There have been 11 days of hearing and additional hearings are scheduled to begin September 8, 2008.

On June 12, 2008, the District filed a motion to stay the rulemaking proceeding. On June 26, 2008, Midwest Generation LLC (Midwest Generation) filed a memorandum in support of the

motion (MGmemo). On June 27, 2008, the Chemical Industry Council (CICI) filed a memorandum in support of the motion (CICImemo). On June 30, 2008, Stepan Company (Stepan) filed a concurrence with the motion (Smemo).

On June 25, 2008, the Environmental Law and Policy Center, Friends of the Chicago River, Sierra Club Illinois Chapter, Natural Resources Defense Council and Openlands (Environmental Groups) filed a response in opposition to the motion (EGResp.). On June 26, 2008, the Chicago Legal Clinic on behalf of the Southeast Environmental Task Force (SETF) filed a response in opposition to the motion (SETFResp.). On June 26, 2008, the Attorney General of the State of Illinois (People) filed a response in opposition to the motion (PResp.). On June 30, 2008, the IEPA filed a response in opposition to the motion (Resp.).

On June 30, 2008, the IEPA also filed numerous documents requested at the prior hearings along with a motion for leave to file a limited number of copies with the Board. That motion is granted.

On July 11, 2008, the District filed a motion for leave to file a reply along with a reply (Reply). The Board grants that motion and accepts the reply.

### **MOTION TO STAY**

The Board will first summarize the District's arguments made in the motion to stay. Next, the Board will summarize each of the responses that support the motion to stay.

### **District's Motion to Stay**

The District indicates that the obligation to protect public health and the environment is taken very seriously by the District and the District has spent "large amounts of money, time and resources" to improve the water quality of the CAWS. Mot. at 1. Further, the District participated in the rule development stakeholder process until the process ended and the rulemaking was proposed. *Id.* The District believes that the proposal has changed in significant ways and ignores "major studies, which could change the IEPA recommendations" and provide essential information in the rulemaking process. *Id.*

The District has participated in the rulemaking proceedings before the Board on the proposed rule. Mot. at 1. The District argues that the hearings have shown that the proposal has major problems scientifically, legally and from a policy perspective. *Id.* Because of these problems the District asks the Board to stay the proceedings until additional studies are completed and the results can be considered. Mot. at 2.

### **Legal Standard for Motion to Stay Proceedings**

The District claims that the Board has inherent authority to grant stays in Board proceedings and sole discretion to grant or deny motions to stay. Mot. at 4, citing Israel-Gerold's v. IEPA, PCB 91-108 (July 11, 1991) and People v. State Oil Co., PCB 97-103 (May 15, 2003). The District asserts that the Board has historically granted motions to stay:

*inter alia*, (1) to avoid wasting time, expenses, or resources (In the Matter of: Petition of Midwest Generation, LLC, Will County Generating Station for an Adjusted Standard from 35 Ill. Adm. Code 225.230, AS 07-04 (Mar. 15, 2007)); (2) to avoid practical difficulties (*Id.*); (2) to avoid duplicative efforts by the Board and other review authorities addressing related issues (*Id.*); and (4) to assist the Board in making the appropriate determination (In the Matter of: Petition of Cabot Corporation for and Adjusted Standard from 35 Ill. Adm. Code Part 738, Subpart B, AS 07-06 (Aug. 9, 2007)). Mot. at 4.

The District notes that a motion to stay must provide sufficient information detailing why a stay is needed and include a status report on the progress of the case. Mot. at 4, citing 35 Ill. Adm. Code 101.514.

### **Reasons For Stay**

The District argues that during the hearing process the District and other parties have discovered “a number of substantial deficiencies” in the proposal by IEPA. Mot. at 5. Specifically, the District claims that the IEPA’s responses to questions have indicated that the IEPA: 1) failed to clearly document the methodologies utilized to arrive at findings and recommendations; 2) did not have adequate data and information to assess aquatic life and water quality standards; 3) did not have adequate data to set water quality standards to protect recreational uses; and 4) did not have adequate information to assess the economic impact of the rulemaking. *Id.* The District delineates specific responses to questions on each of the four areas and asserts that those responses establish the inadequacies in the record. Mot. at 5-10.

The District argues that there are forthcoming studies that will assist the IEPA’s analysis for the proposal and some studies have already been completed. Mot. at 10. The District has already performed a fecal coliform distribution study on CAWS waters and an expert panel study on secondary contact criteria feasibility in the CAWS. *Id.* In addition, a quantitative microbial risk assessment for the recreational uses proposed for the CAWS was recently completed and the report has been submitted to the IEPA. *Id.*

The District is also currently engaged in an ongoing epidemiological study of recreational contamination in the CAWS. Mot. at 10. The District states that the intent of the study is to: 1) validate the results of the quantitative microbial risk assessment, 2) provide scientific data necessary to properly evaluate the actual risk of illness, and 3) provide scientific data on the risk of illness in correlation to indicator bacteria concentrations. *Id.* The District indicates that the study has been approved through the peer review process and the study is scheduled for completion in 2010. *Id.*

The District points to another set of studies on recreational use development on the CAWS that focuses on the cost of complying with the proposed standards. Mot. at 11. Those studies include: 1) a “Blue Ribbon Panel” to evaluate and rank the suitability of all available disinfection technologies for the District’s facilities; 2) preliminary design and cost estimate study for installing various disinfection units; 3) overall costs and environmental impacts

resulting from the proposed rule; 4) a comparison of several UV technologies; and 5) a study of end-of-pipe treatment of the combined sewer overflow (CSO) discharges on CAWS. *Id.* The CSO study has been submitted to the IEPA. *Id.*

The District has a study program to generate more and better data to help develop appropriate aquatic life use designations for the CAWS including evaluation and improvement of habitat, sediment quality data, dissolved oxygen monitoring and ambient water quality monitoring. Mot. at 12. The District points to several ongoing or proposed engineering studies including development of an integrated water quality strategy for CAWS, field tests of aeration stations, and assessing control measures. Mot. at 12-13.

The District argues that the IEPA's proposal has substantial deficiencies and that there are studies currently underway that would be helpful in filling those gaps. Mot. at 14. The District asserts that a stay would allow the IEPA to analyze the scheduled studies, collect other information and submit a complete rulemaking proposal to the Board. Mot. 14. Therefore, the District asks that the Board stay these proceedings, including the schedule set for submittal of testimony, until after ruling on the stay.

#### **Midwest Generation's Response**

Midwest Generation states that during the years the IEPA held stakeholder meetings, Midwest Generation actively participated in the process. MGmemo at 1. Midwest Generation has also been actively participating in the hearings on the proposed rules. *Id.* Midwest Generation shares the District's concerns that the IEPA proposal is fundamentally flawed and cannot be supported based on the factual gaps and faulty assumptions in the record. *Id.* Midwest Generation claims that the IEPA's testimony establishes that development of the proposed rules was harmed by fundamental problems, including IEPA's failure to consider the stakeholders' meaningful input. *Id.*

In addition to specific deficiencies listed in the response (*see* MGmemo at 4-7), Midwest Generation argues that the IEPA failed to consider the need to obtain and review relevant data relating to constraints limiting the attainable uses of the waterways. MGmemo at 2. Midwest Generation further argues that the IEPA failed to consider the technical feasibility or economic costs of the proposed rules. *Id.* Midwest Generation asserts that the IEPA also failed to consider any alternative approaches to the proposed thermal water quality standards. *Id.*

Midwest Generation notes that the IEPA admitted that a 2007 submission by Midwest Generation regarding alternative thermal standards methodology and proposed numerical standards for Upper Dresden Island Pool<sup>1</sup> was not reviewed by the IEPA. MGmemo at 2. Midwest Generation further notes that the IEPA failed to consider 20 years of fish survey data for the Upper Dresden Island Pool that the IEPA had when preparing this rulemaking. *Id.* Midwest Generation asserts that the testimony revealed a complete absence of review of key data or analysis regarding environmental stressors. *Id.*

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<sup>1</sup> The Upper Dresden Island Pool is part of the LDPR.

Midwest Generation maintains that moving ahead with this rulemaking when the IEPA's supporting record "suffers from so many key deficiencies" is not beneficial to the Board, the IEPA, or interested members of the public. MGmemo at 2. Midwest Generation concedes that the burden and expense of presenting Midwest Generation's view in this rulemaking is Midwest Generation's burden. *Id.* However, Midwest Generation asserts that the burden has become unreasonable given the many omissions in the IEPA's record. *Id.* Midwest Generation argues that a pause in the proceedings would result in a more streamlined, cost-effective, and less time consuming rulemaking process before the Board. MGmemo at 3.

Midwest Generation asserts that only at hearing was the IEPA's "selective consideration of limited data related" to Upper Dresden Island Pool evident and Midwest Generation is trying to address the gaps. MGmemo at 3. Midwest Generation is attempting to: 1) gather, review, and analyze data the IEPA ignored; 2) address gaps in the more recently collected data presented by IEPA in this rulemaking; 3) prepare and present a more complete data set and analysis to the Board. *Id.* Some of the data Midwest Generation is collecting cannot be collected until July and that data could have a direct bearing on the IEPA's use designations. *Id.*

Midwest Generation argues that a stay would allow the necessary time to collect and review current data as opposed to the current pre-filing deadline for Midwest Generation testimony. MGmemo at 3. Midwest Generation further argues that a stay would allow the data to be presented first to the IEPA and other stakeholders outside the formal constraints of the rulemaking process. *Id.* Such a process could serve to narrow or resolve the many disputed issues currently in this proceeding. *Id.* For all these reasons, Midwest Generation agrees with the District that a stay is appropriate in this proceeding. *Id.*

#### **CICI'S Response**

CICI joins the District and Midwest Generation in requesting a stay of these proceedings. CICImemo at 1. CICI notes that, as pointed out by both the District and Midwest Generation, the record developed by IEPA "suffers obvious problems" that should be resolved before proceeding. *Id.* CICI asserts that the record reveals a significant lack of data including information and analysis on economic and social impacts of the proposal. *Id.* CICI claims that there is a deficiency in the collection and analysis of environmental data and given these shortcomings a stay should be granted. CICImemo at 2.

#### **Stepan's Response**

Stepan agrees with the District's motion to stay and agrees that a stay would allow IEPA to consider additional information. Smemo at 1. Stepan notes that in addition to those matters that IEPA failed to consider, as determined by the District, IEPA failed to consider potential particulate matter emissions from cooling towers, the cost of retrofitting existing sources, and the thermal quality of industrial dischargers. Smemo at 1-2. Stepan requests that a stay be granted.

#### **RESPONSES IN OPPOSITION TO MOTION TO STAY**

The Board received four responses in opposition to the motion to stay. The Board will first summarize the response from the IEPA and then the response from the People. Next the Board will summarize the Environmental Groups response and the response by SETF.

**IEPA's Response**

The IEPA agrees with the District that a stay may be granted; however, the IEPA emphasizes that the District does not cite to a single case where the Board granted a motion to stay in a regulatory proceeding without the support of the IEPA. Resp. at 2. The IEPA notes that the District states there are four situations where the Board typically grants a stay; but that four-part test is not found in the cases cited in the District's motion. *Id.* The IEPA argues that a stay would not save time, expenses or resources and would cause practical difficulties. *Id.* Further, the IEPA asserts that there are not ongoing proceedings that would duplicate the work of the parties in this proceeding, and a multi-year span between the IEPA's testimony and the regulated community would not assist the Board in a final determination. *Id.*

IEPA states that the IEPA has worked on this proposal since 2000 and the District has been a participant since the beginning. Resp. at 2. The IEPA met all the filing requirements under the Act and the Board's rules. *Id.* In addition, the IEPA has answered questions in hearings over 10 days and filed additional information with respect to the proposal in March and April of 2008. Resp. at 3. Further, the proposal submitted is a very detailed rulemaking package and the IEPA asserts that the submission of the proposal and the answering of questions meet the IEPA's burden. *Id.*

The IEPA argues that instead of delaying these proceedings for two years in the "hopes that more relevant information will be produced" now is the time for the District or any other party who disagrees with the proposal to come forward and present counter arguments. Resp. at 3. The IEPA disagrees that the requested delay would add to the record or produce needed changes to the IEPA's proposal. *Id.* The IEPA also does not feel a delay is necessary for studies currently being undertaken. *Id.* The IEPA states that no delay is needed for review of the studies as the IEPA is prepared to review the studies as the rulemaking moves forward. *Id.*

The IEPA notes that the District "makes much of the need for additional information" regarding bacteria. Resp. at 3. The IEPA points out that the IEPA's Statement of Reasons recognized that the states are waiting on USEPA to update national criteria for bacteria. *Id.*, citing Statement of Reasons at 42-46. The IEPA maintains that this issue was addressed in the proposal by the technology based effluent requirement in 35 Ill. Adm. Code 304 and proposing appropriate designated recreational uses for both the CAWS and the LDPR. Resp. at 3-4.

The IEPA argues that granting a stay at this juncture would cause a delay in the rulemaking that could be detrimental to the waterway that needs improvement now. Resp. at 4. The IEPA maintains that the IEPA and participants have already dedicated a lot of time and resources to this rulemaking and a return to the stakeholder process would not be appropriate. *Id.* As to the District's arguments regarding economic reasonableness, the IEPA states that the IEPA has stated on the record that the proposal is economically reasonable and technically feasible. *Id.*

**People's Response**

The People oppose the motion to stay arguing that staying the rulemaking “would be injurious to the public interest, harmful to the environment, and would result in an extraordinary waste of the resources” of the Board. PResp. at 1. The People argue that when considering a motion to stay, the Board “carefully weighs” the extent to which a stay would burden the Board or otherwise waste time and resources. *Id.*, citing Vernon and Elaine Zohfeld v. Bob Drake et. al., PCB 05-193 (Feb. 2, 2006). Further, the Board denies stays when the effect of the stay could harm the environment or be injurious to public interest. *Id.*, citing People v. ESG Watts, PCB 96-107 (Mar. 19, 1998).

The People argue that the motion to stay is premised on:

(1) a one-sided (mis)characterization of the record offered by counsel for the District; (2) alleged deficiencies in the record [footnote omitted] that counsel for the District claims to have identified; and (3) unsupported and self-serving assertions regarding the nature and the expected findings of certain studies that the District might perform during the pendency of a stay. PResp. at 2.

The People assert that these premises are not a factual basis for a stay and no affidavits or verified filings were included. *Id.* The People maintain that “counsel’s unsupported and unverified assertions” are insufficient for the Board to base a decision to stay the proceeding. *Id.*

The People argue that the granting of the stay would interfere with the Board’s ability to manage the Board’s docket and would waste time and resources. PResp. at 2. The People claim that the IEPA has spent nearly a decade “conducting detailed analyses” in preparation for this rulemaking. *Id.* Further IEPA has actively involved stakeholders in the process since at least 2002 and IEPA’s efforts culminated in the proposal. PResp. at 3. Also, with the deadline for pre-filing of testimony for the next hearings scheduled for August 4, many parties including the People, have retained witnesses and are working to finish testimony for the deadline. *Id.*

The People argue that all stakeholders have had “ample time to conduct studies and prepare testimony” for the rulemaking. PResp. at 3. The People maintain that the District’s decision to file a motion to stay rather than testimony is “surprising” and if the District needs more time the problem is of the District’s own making. *Id.*

The People note that under the Clean Water Act (33 U.S.C. §1251), the State is required to conduct a triennial review and to review and revise, as necessary, effluent limitations at least every five years. PResp. at 5, citing 33 U.S.C. §1311(c)(1), 40 C.F.R. 131.20. The People argue that the Board is on course to make a determination on attainable uses in CAWS and the LDPR and the water quality standards and effluent limitations necessary to attain those uses. PResp. at 6. The People assert that failure to make this determination would not only be harmful to the environment and the public interest but would also violate clear deadlines established by federal law. *Id.*

The People argue that the granting of the stay is contrary to Board precedent and the District does not cite any previous Board orders in which the Board granted a motion to stay by a participant. PResp. at 6. The People note that a search of the Board's records indicates that the Board has never been presented with such a motion. *Id.* The People argue that the cases cited by the District are easily distinguishable and that in those cases the Board primarily granted the motion because of a related concurrent proceeding. PResp. at 7.

### **Environmental Group's Response**

The Environmental Groups oppose the District's motion for stay because the need to upgrade the standards protecting recreation and aquatic life in the CAWS is urgent and supported by the evidence. EGResp. at 2. The Environmental Groups argue that the proposed rules are not rushed and may be arguably decades overdue. *Id.* The Environmental Groups note that the IEPA is required to evaluate uses for water-bodies every three years; however most of the CAWS has not been formally reviewed since 1972. *Id.* The Environmental Groups note that IEPA began the review process for CAWS in 2002 and the District cooperated in the studies and other portions of the use attainability analysis (UAA). EGResp. at 3. The Environmental Groups state that IEPA circulated a draft set of rules in January, 2007 and USEPA indicated that the rules did not offer sufficient protection. *Id.* Additional meetings were then held on the draft proposal before the final proposal was made to the Board. *Id.*

In response to the "laundry list of deficiencies" cited by the District, the Environmental Groups argue that the burden is on opponents of the rulemaking to demonstrate that the CAWS cannot sustain uses proposed by the IEPA. EGResp. at 4. The Environmental Groups state that the law is clear that there is a rebuttable presumption that every water body should support fishable and swimmable uses. *Id.*, citing Kansas Natural Resource Council v. Whitman, 255 F.Supp. 2d 1208, 1209 (D. Kan. 2003); Idaho Mining Ass'n v. Browner, 90 F. Supp. 2d 1078, 197-98 (D. Idaho 2000). The Environmental Groups further state that unless the state demonstrates using the UAA factors that a use cannot be attained in a particular water body, fishable and swimmable uses are assumed. EGResp. at 4-5.

The Environmental Groups maintain that the UAA regulations provide six ways to rebut the presumption of a fishable/swimmable water and five of those reason deal with physical limitations and one allows for consideration of economic factors. EGResp. at 5, citing 40 C.F.R. § 131.10(g). The Environmental Groups argue that without putting on any evidence, the District alludes to the possibility that the proposed standards should not apply because of economic hardship. *Id.* The Environmental Groups assert that the Board's evaluation of technical feasibility and economic reasonableness must be done in conjunction with the federal requirements. EGResp. at 5-6. The Environmental Groups claim that an argument that disinfection is infeasible or economically unreasonable is "preposterous" as disinfection is required almost everywhere across the State. EGResp. at 6, citing 35 Ill. Adm. Code 302.209.

The Environmental Groups maintain that the alleged deficiencies in the record cited by the District are based on a distortion of the record and the Environmental Groups offer responses to many of the listed deficiencies. EGResp. at 8-13. The Environmental Groups argue that the studies cited by the District are not indispensable to this proceeding and that no explanation on

why the studies were not undertaken earlier. EGResp. at 13-14. The Environmental Groups point particularly to the epidemiological study and assert that a colleague of the leading researcher on that study does not believe the study is a reason for delay. EGResp. at 14. As to the other studies, the Environmental Groups claim that the District will need to complete some of those studies regardless of this rulemaking. EGResp. at 16.

#### **SETF's Response**

SETF opposes the motion to stay arguing that the motion is premature and incorrect. SETFResp. at 6. The motion is premature because a "major, legally required component of this rulemaking" is not complete and that component is the opportunity of participants other than IEPA to present testimony and comment. *Id.* SETF argues that if a stay is granted the evidence gathering necessary for the Board to evaluate the arguments of the District or any other participant would be prematurely terminated. *Id.* SETF plans to present testimony concerning the recreational uses of the Calumet River system and the parks and recreational areas through which the Calumet River flows. SETFResp. at 6-7. SETF states that this testimony and subsequent comments by SETF will help the Board in evaluating the IEPA's use designations and the disinfection requirements. SETFResp. at 7.

SETF disagrees with the characterization by the District of the law on stays. SETFResp. at 7. SETF argues that the Board is authorized to: 1) control only one source category, 2) control discharges despite collateral environmental impacts, 3) control discharges because of potential threats without finding actual harm, 4) control discharges from sources even if contributions to overall pollution is small, and 5) implement requirements even if regulated entities will bear costs. SETFResp. at 7-8, citing In the Matter of: Proposed New 35 Ill. Adm. Code 225 Control of Emissions from Large Combustion Sources (Mercury), R06-25.

Further SETF claims that the legal requirements behind this proceeding are very different than the District asserts. SETFResp. at 8. SETF argues that under the Clean Water Act the IEPA is under a non-discretionary duty to assess Illinois waters to ensure that the waters are safe for the people and wildlife using them, "now and in the future, until the waters are fully fishable and swimmable." *Id.*, citing 33 U.S.C. § 1313(c)(1), 40 CFR 131.10(j)(1). SETF states that to fulfill this duty, IEPA engaged in a process, over several years, involving multiple stakeholders to assess the present attainable uses of the CAWS, and IEPA determined that some decades old classifications should be changed. SETFResp. at 8. SETF notes that new recreational uses trigger Clean Water Act mandates to ensure that the CAWS is safe for these uses. *Id.* SETF points out that the District's wastewater treatment plants are sources of pathogens into waters which are now classified for recreational uses and disinfection is almost uniformly employed by POTWs in Illinois and throughout the United States to control these kinds of pathogens. *Id.* SETF opines that affording "any value" to the District's broad claims that disinfection is technically infeasible and will result in substantial and widespread economic and social impact, is difficult. *Id.*

SETF states that from their perspective, the IEPA proposal designates uses for which CAWS should be maintained and protected, prescribes water quality standards necessary to sustain the designated uses, and establishes effluent standards to limit contaminant discharges to

CAWS. SETFResp. at 8-9. SETF argues that the IEPA's proposal is within IEPA's legal mandate under both federal and state law. SETFResp. at 9, citing 35 Ill. Adm. Code 301.102 and 33 U.S.C. § 1370.

SETF argues that granting the stay would be fundamentally unfair to the participants in this rulemaking as the Board has received over 70 comments on the rule and 44 individuals testified at a June 16, 2008 hearing regarding the proposal. SETFResp. at 9. Further, for the first time in the September hearings environmental organizations will be given an opportunity to present testimony and evidence concerning the proposed rule. *Id.* SETF claims that the stay could be viewed as an attempt to allow the testimony already given to go stale and this is against the public interest. *Id.*

SETF asserts that granting the stay would allow the District to subvert the rulemaking process that dozens of participants have engaged in good faith. SETFResp. at 10. SETF maintains that many of the internal District activities cited in the motion have been underway for years and will take many more years to complete. *Id.* Further, SETF asserts that a stay would "damage the public trust and confidence in the Board" because the rulemaking is generating public interest and participation from numerous entities. SETFResp. at 11. SETF maintains that the stay will be ascribed to the Board and the Board will be regarded as responsible for allowing additional years of human contact with pathogens. SETFResp. at 11-12.

#### **DISTRICT'S REPLY**

The District notes that the participants seem to recognize that a stay would be appropriate to avoid wasting time, expenses and resources, and that is the purpose of the District's motion. Reply at 2. The District claims the motion to stay was filed to avoid the needless expense of pushing forward with rulemaking proceedings that may ultimately need to be repeated. *Id.* The District indicates that in the coming months the District will present over 20 witnesses and other participants also intend to present witnesses. *Id.* The District asserts that based on the substantial number of witnesses that will need to be questioned, proceeding with this rulemaking when much of the support needed will be provided in the reports outlined by the District does not make much sense. *Id.* The District also notes that many of the reports, identified in the motion, were specifically requested by IEPA or that current studies are being conducted to address issues raised by the reports requested. *Id.*

The District notes that the responses in opposition to the motion offer several specific challenges to the motion to stay, but the common themes are that the UAA process has been ongoing for six years and the IEPA has adequately supported the proposal or need not support certain aspects. Reply at 3. The District agrees that the IEPA has answered numerous questions and that the rulemaking has been ongoing for six years. Reply at 3-4. The District argues that a great volume of data is not a substitute for complete analysis and much of the IEPA's testimony shows that the IEPA has failed to perform the necessary legal and technical analysis. Reply at 4.

The District disagrees that the burden to justify the changed use designations is not on the IEPA. Reply at 4. The District agrees that if the CAWS designation was fishable/swimmable, then the IEPA would not need to justify the standard, but the streamlined process does not apply

when designating other than fishable/swimmable. *Id.* The District also takes issue with the claim that Illinois specifically requires disinfection for vast stretches of water and that the requirements are simple proximity to parks or residential areas to require disinfection. Reply at 6.

The District argues that discussions about proposed water quality standards have been on going so the push for an urgent resolution is disingenuous. Reply at 22. The hearings that have already taken place will not go to waste unless the rulemaking continues and the significant holes are not resolved and the rule proposal fails to withstand the Board's scrutiny. Reply at 21. The District is not using the motion as a tactical ploy to delay the rulemaking as many of the studies being undertaken are done so at the request of the IEPA. Reply at 23. The IEPA did not wait for the District to complete the studies but proceeded to propose changes and the District argues that the District can hardly be blamed for timing issues associated with particular studies. Reply at 23-24. The District undertook additional studies as soon as the District became aware that IEPA would be proposing new standards without much of the information needed to justify them. Reply at 24.

The District maintains that the District was not obligated to undertake these studies. Reply at 24. The IEPA is attempting to change the designated uses and IEPA has the responsibility to justify UAAs with information supporting the decision. Reply at 24, citing 40 C.F.R. § 131.10(g), (j). The District's desire to supplement the rulemaking with studies to fill gaps is not an obligation to conduct the studies. Reply at 24. Furthermore, the District could not know the full extent of the informational gaps in the IEPA's proposal until the IEPA proposed the rulemaking and the District could not fully appreciate the gaps until the IEPA completed the testimony in April. Reply at 25. Thus, the District timely moved for a stay and Midwest Generation, Stepan, and CICI support that motion. Reply at 26.

### DISCUSSION

The Board has reviewed the arguments by the participants concerning the requests to stay the proceedings. The Board notes that there have already been 11 days of hearing beginning in January 2008, including one evening hearing between the April hearings and the hearings scheduled for September. Since the September hearings are devoted to testimony by participants other than the IEPA on use designations only, there will be future hearings on the proposal so participants have the opportunity to testify on the water quality standards proposed by the IEPA. The hearing officer will schedule additional hearings on the water quality standards after conclusion of testimony on the use designations. Finally, the Board has already given participants several months to prepare testimony for the scheduled September hearing.

The Board is not convinced that an additional delay is warranted at this time. The hearing process and information gathering by the Board will continue at least until the Board has heard testimony from all participants who wish to testify on all aspects of the IEPA's proposal. Additional testimony will provide a more complete record and enable the Board to make the best possible decisions regarding the IEPA's proposed rules. The Board finds that this process is proceeding in an appropriate manner and a stay is not necessary at this time. The Board denies

the motion to stay and will not disturb the hearing officer's order on the prefilings of testimony and questions for the September hearings.

**CONCLUSION**

The Board finds that a stay is not warranted at this time and therefore denies the motion for stay. The hearing schedule, including all prefilings deadlines for the hearings starting September 8, 2008, is unchanged from the hearing officer's May 19, 2008 order. Thus, prefiling testimony is due August 4, 2008, and the mailbox rule does not apply.

IT IS SO ORDERED.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on July 21, 2008, by a vote of 4-0.



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John T. Therriault, Assistant Clerk  
Illinois Pollution Control Board

# **Exhibit C**

~~ORIGINAL~~

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
 WATER QUALITY STANDARDS AND )  
 EFFLUENT LIMITATIONS FOR THE )  
 CHICAGO AREA WATERWAY SYSTEM )  
 AND THE LOWER DES PLAINES )  
 RIVER: PROPOSED AMENDMENTS )  
 TO 35 Ill. Adm. Code Parts 301, )  
 302, 303 and 304 )

R08-09  
 (Rulemaking-  
 Water

**RECEIVED**  
 CLERK'S OFFICE

APR 27 2009

STATE OF ILLINOIS  
 Pollution Control Board

REPORT OF THE PROCEEDINGS held in the

above entitled cause before Hearing Officer Marie  
 Tipsord, called by the Illinois Pollution Control  
 Board, taken by Steven Brickey, CSR, for the State  
 of Illinois, 100 West Randolph, Chicago, Illinois,  
 on the 15th day of April, 2009, commencing at the  
 hour of 9:00 a.m.

1 study, no matter how well designed and executed,  
2 no matter what the ultimate result, is sufficient  
3 basis to refuse to address water borne pathogens  
4 in the CAWS." Would you recommend that regulators  
5 make the decision without the benefit of  
6 epidemiologic studies?

7 MR. ORRIS: Certainly not.

8 MR. ANDES: So what do they need in  
9 order to make a decision?

10 MR. ORRIS: Well, first of all,  
11 thank you very much for inviting me today. I  
12 appreciate this opportunity and thank you for your  
13 service on this Board. These are very important  
14 issues that you are coping with and often outside  
15 of the public limelight so I appreciate that. For  
16 those of us in the academic field in environmental  
17 health, we are very happy that those of you are  
18 serving in this way and making these decisions.

19 Having said that, what do I  
20 think you need to take into account when you are  
21 arriving at regulatory decisions in this specific  
22 matter? Certainly, epidemiologic studies are  
23 helpful and these studies should help as one piece  
24 of evidence guiding your approach to understanding

1 what risks and benefits there are from your  
2 decisions. The problem with epidemiologic studies  
3 as you know, as with any science, is they try to  
4 approximate the world around us and try to educate  
5 us as to what are the risks and benefits in the  
6 world around us, but they are limited because they  
7 are based on people and they are looking at the  
8 world around us. We are not able to look  
9 epidemiologically at controlled studies in which  
10 people are placed in certain environments and one  
11 can control those environments entirely.

12 Having said that, even the best  
13 epidemiologic studies have -- always have problems  
14 in their ability to identify actual events and  
15 actual relationships that are really there. And  
16 that's characterized, in general, by an assessment  
17 of the power of that study. The power of the  
18 study means how likely is it when we look at a  
19 study and when this study looks at a problem and  
20 looks for a relationship how likely it is given  
21 the design of the study and the size of the study  
22 that we will actually see a relationship if it is  
23 there. Otherwise, called how large is a false  
24 negative or whatever and by convention and with

1 respect to this quite excellent study that  
2 Dr. Dorevitch is projecting, the standard that we  
3 set is based on our preconceived, at priority  
4 judgments that we hope that the power will be 80  
5 percent.

6 In other words, if there's a  
7 real relationship, we will see it 80 percent of  
8 the time and we will miss it 20 percent of the  
9 time. By definition, this is not as stringent as  
10 we place on the reverse side and that is in the  
11 study if there's a relationship how likely is it  
12 that we are going to see it erroneously? We'll  
13 see the relationship, but, in fact, it will be due  
14 to something else. That's the sensitivity of that  
15 study and we set that standard higher on the basis  
16 that we understand that epidemiologic studies help  
17 us identify relationships and help us less in  
18 ruling out relationships that may well exist.

19 So, for one, epidemiologic  
20 studies in and of themselves are limited by the  
21 science of that and this study, while excellent,  
22 is limited by those same things. In addition,  
23 this study, and epidemiologic studies in general,  
24 look at rather large homogeneous populations so

1 that if you have subpopulations at particular risk  
2 in this study design, you will lose their risk  
3 within the overall grouping here and this study  
4 talks about adults. It talks about population in  
5 general. It does not discuss the subsections of  
6 small children, young children, who may be using  
7 these waterways in more depth or more --

8 MR. ANDES: Are you aware of any way  
9 in which they're excluding those people?

10 MR. ORRIS: No, they are included  
11 but the problem is when you put them in with the  
12 9,000 you're looking at you lose that particular  
13 aspect when you don't look particularly at that  
14 group. And the problem with looking at that  
15 group, as you know, is you get smaller and smaller  
16 populations and, therefore, your power to see a  
17 real relationship in a smaller population is much  
18 more difficult. So that's the second aspect of  
19 this particular study that is problematic. It  
20 doesn't mean it's a bad study. It's an excellent  
21 study. We support that study. We support this  
22 further review. It may demonstrate despite those  
23 problems, things we need to look at with respect  
24 to those waterways and what ought to be done about

1 it, but it is only one piece of the overall  
2 puzzle.

3 And, unfortunately, you have  
4 quite a high threshold here. You have one of the  
5 oldest known associations between the environment  
6 and disease and that is the ingestion of pathogens  
7 from water. We have known since antiquity that  
8 the injection of pathogens from water causes  
9 disease. We have known for many years that one of  
10 the most important public health initiatives, one  
11 of the most important public health preventive  
12 measures taken in the last 100, 200 years is the  
13 disinfection of water when it comes into contact  
14 with human beings in a variety of ways.

15 Having said that, then we also  
16 have a standard adopted throughout the country and  
17 much of the world that says that these waterways  
18 ought to be disinfected and that recreational  
19 waterways of this sort ought to be disinfected.  
20 And, finally, we have what looked to me to be a  
21 very balanced recommendation from the IEPA on it  
22 also.

23 So to overturn all of that  
24 weight, if you will, you need to have considerable

1 MR. ANDES: Okay. You're aware --  
2 are you aware that NRDC has signed a settlement  
3 agreement with EPA concerning the Beach Act  
4 criteria which specifically requires EPA to  
5 conduct epidemiological studies to be used in  
6 developing water quality criteria?

7 MR. ORRIS: Of course. Having read  
8 it, and I'm not an expert in all these aspects of  
9 water control here. It looks quite complete to  
10 me. It has epidemiologic studies. It looks at  
11 subpopulations. It does monitoring. It does a  
12 whole wrath of -- or they commit themselves to a  
13 whole wrath of investigations that are most  
14 appropriate for this problem.

15 MR. ANDES: And you're aware that in  
16 this record in addition to the epidemiologic study  
17 which has been discussed in Dr. Dorevitch's  
18 testimony and will be available early next year  
19 there has been risk assessment information and  
20 other information provided to the Board all which  
21 I imagine you think should be considered in  
22 considering the totality of the information?

23 MR. ORRIS: Certainly.

24 MR. ANDES: Okay. As to this

1 do not include wind surfing?

2 MR. ORRIS: Well, you had that  
3 strange word in there "some". Obviously, some  
4 could be different. If you're saying all, if  
5 you're saying are there activities that may be  
6 frequently done in the waterways that may parallel  
7 the amount of exposure as wind surfing or as the  
8 rowing, kayaking and other studies, I would say  
9 absolutely there will be activities on these  
10 waterways that will parallel some of these other  
11 studies that should inform us or rather these  
12 other studies should be part of our consideration  
13 or part of the Board's consideration when they  
14 look at this.

15 MR. ANDES: In fact, the CHEER study  
16 is specifically looking at the exposures that  
17 people are undergoing on the CAWS system, correct?

18 MR. ORRIS: Yes, absolutely.

19 MR. GORELICK: If I might add.  
20 There are -- I'm aware of no studies that have  
21 looked at the amount of water that's ingested  
22 during secondary contact recreation such as  
23 boating. There are studies that have looked at  
24 how much water is swallowed during swimming, some

1 lights, which corners shouldn't. That's way  
2 beyond my expertise and I suspect not terribly  
3 relevant to this.

4 That was an example of the  
5 problem before a board such as yours and other  
6 regulatory board's and that's what you have to  
7 weigh. I'm here to help with an understanding of  
8 the question as to whether or not a single  
9 epidemiologic study can be used as the basis,  
10 especially a single negative epidemiologic study,  
11 can be used as the basis for a regulatory decision  
12 to overturn current approaches and policies that  
13 are well established.

14 MR. ANDES: Dr. Orris, is any one  
15 here suggesting or has said in writing that this  
16 should be the sole basis for the decision by the  
17 Board?

18 MR. ORRIS: What I take to be the  
19 question I'm asked is should the Board rely on the  
20 CHEER study as the basis for making their  
21 regulatory decision within this situation and that  
22 is what I am specifically talking about. In fact,  
23 when I read my colleague, Dr. Dorevitch's  
24 excellent testimony about his -- I want to say

1 again, his excellent study. And we appreciate the  
2 fact that you came to the U of I to secure such an  
3 excellent study.

4 MR. ANDES: As the brother of an  
5 alumnus, I appreciate that as well.

6 MR. ORRIS: Good. Having said that,  
7 reading his last line within his system and  
8 perhaps this was overstated unintentionally, but  
9 he does say that this is the -- that this should  
10 be the basis for consideration here. "The" is the  
11 word I take issue with.

12 MR. ANDES: Your --

13 MR. ORRIS: It should certainly be a  
14 basis.

15 MR. ANDES: So your quarrel is with  
16 that one word in Dr. Dorevitch's testimony?

17 MR. ORRIS: I'm sorry?

18 MR. ANDES: Your quarrel is with  
19 that one word in Dr. Dorevitch's testimony.

20 MR. ORRIS: Yes. The rest I thought  
21 I have some differences with, but he has high  
22 quality testimony.

23 MR. ANDES: Now, when you talk about  
24 balancing, it sounds like there are other factors

1 the assessment of the small studies that are done  
2 of this kind of use of contaminated water. In  
3 fact, lower levels than these contaminations have  
4 been identified and the fact that that's  
5 incorporated into people and has produced  
6 symptomatic disease. So we know that this type of  
7 use of this type of contaminated water is a  
8 problem and it needs effective preventive  
9 measures. And, again, a sign that says "Keep your  
10 mouth shut. Don't swallow anything," to a kayaker  
11 or wind surfer is not effective public health. It  
12 may be the only thing we have available now, but  
13 long term, we have to come up with better  
14 approaches.

15 MR. ANDES: As to the CAWS itself, I  
16 gather we'll have a better sense through the  
17 questions in the CHEERS study as to what extent  
18 those precautions have affected people's habits,  
19 correct?

20 MR. ORRIS: Again, this goes over  
21 what we previously talked about with respect to  
22 the study. We may learn some very important  
23 things from that study about the water use, et  
24 cetera. If we do not see a relationship that we

1 the bacteria or inactivates all the bacteria and  
2 some are better than others.

3 MS. TIPSORD: And, for the record, I  
4 would note that Dr. Blatchley's testimony was  
5 Exhibit 93.

6 MR. GORELICK: If I could add  
7 because this question, again, came up in pre-filed  
8 questions to me. I've also looked at Dr.  
9 Blatchley's testimony as well as his article and  
10 my understanding is that disinfection does not, in  
11 fact, remove all pathogens, however the  
12 disinfection method studies shows that when you  
13 disinfect levels of indicator bacteria do drop.  
14 That in some cases they come back, that some  
15 methods are more beneficial than others, but I  
16 don't think the conclusion was that disinfection  
17 is useless.

18 MR. ANDES: I don't think anyone  
19 suggested that. As to the -- and to some extent  
20 we may have addressed this, Dr. Orris, when you  
21 reviewed to the CHEER study as an excellent study,  
22 you're aware, are you not, that the research plan  
23 was evaluated by a panel of recognized leaders in  
24 the field and they determined the study, quote,

1 has been designed to provide information that is  
2 valuable in the area of health risks associated  
3 with secondary contact recreation and addressed  
4 potential deficits in the current knowledge and  
5 health risks associated with limited contact water  
6 recreation and the measures acquired to protect  
7 the public?

8 MR. ORRIS: Yes, I absolutely agree  
9 with that.

10 MR. ANDES: Okay. Thank you.

11 MS. TIPSORD: Excuse me, Mr. Harley  
12 has a question.

13 MR. HARLEY: Hi. My name is Keith  
14 Harley. I'm an attorney for the Southeast  
15 Environmental Task Force. There was a pre-filed  
16 question I believe you skipped over that I believe  
17 might be helpful in terms of creating the record.  
18 The pre-filed question was seven and it was  
19 subpart A. It was: What do you consider to be  
20 high levels of indicator bacteria? You eluded to  
21 the effect in an answer to another question that  
22 you believe the levels of indicator bacteria found  
23 in the CAWS were high. Could you please explain  
24 for the Board on what basis you came to that

1 STATE OF ILLINOIS. )  
2 ) SS.  
3 COUNTY OF COOK )  
4  
5

6 I, Steven Brickey, Certified Shorthand  
7 Reporter, do hereby certify that I reported in  
8 shorthand the proceedings had at the trial  
9 aforesaid, and that the foregoing is a true,  
10 complete and correct transcript of the proceedings  
11 of said trial as appears from my stenographic  
12 notes so taken and transcribed under my personal  
13 direction.

14 Witness my official signature in and for  
15 Cook County, Illinois, on this 27<sup>th</sup> day of  
16 April, A.D., 2009.

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\_\_\_\_\_  
STEVEN BRICKEY, CSR  
29 South LaSalle Street  
Suite 850  
Chicago, Illinois 60603  
Phone: (312) 419-9292  
CSR No. 084-004675

# **Exhibit D**

~~ORIGINAL~~

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
 WATER QUALITY STANDARDS AND )  
 EFFLUENT LIMITATIONS FOR THE )  
 CHICAGO AREA WATERWAY SYSTEM )  
 AND THE LOWER DES PLAINES )  
 RIVER: PROPOSED AMENDMENTS )  
 TO 35 Ill. Adm. Code Parts 301, )  
 302, 303 and 304 )

R08-09  
 (Rulemaking-  
 Water

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APR 27 2009

STATE OF ILLINOIS  
 Pollution Control Board

REPORT OF THE PROCEEDINGS held in the

above entitled cause before Hearing Officer Marie  
 Tipsord, called by the Illinois Pollution Control  
 Board, taken by Steven Brickey, CSR, for the State  
 of Illinois, 100 West Randolph, Chicago, Illinois,  
 on the 15th day of April, 2009, commencing at the  
 hour of 9:00 a.m.

1 think the same is true when you're looking at  
2 recreational exposure.

3           Try to identify outbreaks of  
4 diseases is very challenging for a lot of reasons  
5 about which Peter talked about. Many of these  
6 things don't get reported. When the diseases come  
7 to medical attention, they don't necessarily get  
8 attributed to the exposure at hand unless all of a  
9 sudden you get 400,000 people showing up in the  
10 emergency room like you did in Milwaukee.

11           I think that's actually one of  
12 the nice strengths of the CHEER study is -- that  
13 it is another study that is attempting to look at  
14 this in a way that identifies prospective diseases  
15 that may not occur in outbreaks. Like some of the  
16 other surveys that have already been done in other  
17 settings that have shown there is an increased  
18 risk. None out of those reported outbreaks. They  
19 were done through prospective surveillance. We  
20 need more of that kind of prospective surveillance  
21 to add to the existing body that shows that there  
22 are risks associated with that and to try to  
23 quantify it.

24           MS. TIPSORD: Excuse me,

1 STATE OF ILLINOIS. )  
2 ) SS.  
3 COUNTY OF COOK )  
4  
5

6 I, Steven Brickey, Certified Shorthand  
7 Reporter, do hereby certify that I reported in  
8 shorthand the proceedings had at the trial  
9 aforesaid, and that the foregoing is a true,  
10 complete and correct transcript of the proceedings  
11 of said trial as appears from my stenographic  
12 notes so taken and transcribed under my personal  
13 direction.

14 Witness my official signature in and for  
15 Cook County, Illinois, on this 27<sup>th</sup> day of  
16 April, A.D., 2009.

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21  
22  
23  
24

Steven Brickey  
STEVEN BRICKEY, CSR  
29 South LaSalle Street  
Suite 850  
Chicago, Illinois 60603  
Phone: (312) 419-9292  
CSR No. 084-004675

# **Exhibit E**

**ORIGINAL**

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
 )  
 WATER QUALITY STANDARDS AND )  
 EFFLUENT LIMITATIONS FOR THE )  
 CHICAGO AREA WATERWAY SYSTEM )  
 AND THE LOWER DES PLAINES )  
 RIVER: PROPOSED AMENDMENTS )  
 TO 35 Ill. Adm. Code Parts )  
 301, 302, 303 and 304 )

R08-09  
 (Rulemaking-  
 Water)

**RECEIVED**  
**CLERK'S OFFICE**

**MAY 20 2009**

**STATE OF ILLINOIS**  
**Pollution Control Board**

REPORT OF PROCEEDINGS held in the

above-entitled cause before Hearing Officer Marie  
 Tipsord, called by the Illinois Pollution Control  
 Board, taken before Laura Mukahirn, CSR, a notary  
 public within and for the County of Cook and State  
 of Illinois, at the Thompson Center, Chicago,  
 Illinois, on the 5th day of May, 2009, commencing at  
 the hour of 10:00 a.m.

1 A. I certainly hope so.

2 Q. Okay. Whatever the results, they will  
3 be relevant, correct?

4 A. They will be one part of the  
5 considerations that EPA evaluates and members of the  
6 scientific community evaluate as they develop those  
7 criteria. They're not just doing risk assessment  
8 studies. That's one component of the process.

9 Q. And the epidemiological study being  
10 done as to the CAWS, which is the first one being  
11 done as to secondary contact, you would agree that  
12 that would as well be relevant in determining  
13 appropriate water quality standards for the CAWS?

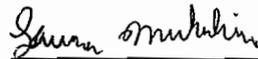
14 A. I would say that the epidemiological  
15 study that's being conducted by Dr. Gorovich would  
16 certainly be one piece of information that would be  
17 relevant to consider when determining what happens  
18 with respect to the issues at hand here.

19 MS. WILLIAMS: I'd like to follow up  
20 on this question four real quick.

21 Can you explain the statement  
22 that Mr. Andes has flagged here from your  
23 testimony regarding efforts to reevaluate  
24 pathogen indicator criteria have no bearing

1 STATE OF ILLINOIS )  
2 ) SS.  
3 COUNTY OF COOK )  
4

5 I, LAURA MUKAHIRN, being a Certified  
6 Shorthand Reporter doing business in the City of  
7 Chicago, Illinois, County of Cook, certify that I  
8 reported in shorthand the proceedings had at the  
9 foregoing hearing of the above-entitled cause. And  
10 I certify that the foregoing is a true and correct  
11 transcript of all my shorthand notes so taken as  
12 aforesaid and contains all the proceedings had at  
13 the said meeting of the above-entitled cause.  
14  
15  
16

17 

18 LAURA MUKAHIRN, CSR

19 CSR NO. 084-003592  
20  
21  
22  
23  
24

~~ORIGINAL~~

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

WATER QUALITY STANDARDS AND )  
EFFLUENT LIMITATIONS FOR )  
THE CHICAGO AREA WATERWAY )  
SYSTEM AND THE LOWER )  
DES PLAINES RIVER: ) No. R08-9  
PROPOSED AMENDMENTS TO )  
35 Ill. Adm. Code Parts )  
301, 302, 303 and 304 )

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**MAY 20 2009**  
**STATE OF ILLINOIS**  
**Pollution Control Board**

REPORT OF PROCEEDINGS had before the  
ILLINOIS POLLUTION CONTROL BOARD held on May 5,  
2009, at 1:15 o'clock p.m. at the Thompson Center,  
Room-9-40, Chicago, Illinois.

1 MR. ANDES: The epidemiological  
2 study, the CHEERS study that's going on now  
3 will give us a better idea of that answer?

4 DR. YATES: That's my understanding,  
5 yes.

6 MR. ANDES: So that would also be  
7 information that the Board would want to  
8 consider in making a decision here?

9 DR. YATES: I would imagine that the  
10 Board would consider that information, yes.

11 MR. ANDES: The next question was  
12 what is the actual micro exposure dose  
13 exposed by paddlers, boaters and fishers in  
14 the CAWS?

15 DR. YATES: Well, I guess the actual  
16 number of microorganisms they would consume  
17 would depend on the amount of water they  
18 ingest, as well as the concentration of  
19 microorganisms that were present in that  
20 water.

21 MR. ANDES: So one would look at the  
22 Risk Assessment and the epidemiological  
23 study together to get some perspective on  
24 that since you can't measure directly the

1 STATE OF ILLINOIS )  
 ) SS.  
2 COUNTY OF C O O K )  
3

4 I, DENISE A. ANDRAS, being a Certified  
5 Shorthand Reporter doing business in the City of  
6 Des Plaines, Illinois, County of Cook, certify  
7 that I reported in shorthand the proceedings had  
8 at the foregoing hearing of the above-entitled  
9 cause. And I certify that the foregoing is a true  
10 and correct transcript of all my shorthand notes  
11 so taken as aforesaid and contains all the  
12 proceedings had at the said meeting of the  
13 above-entitled cause.

14

15

16

17

*Denise Andras*

DENISE A. ANDRAS, CSR  
CSR NO. 084-0003437

18

19

20

21

22

23

24

~~ORIGINAL~~

Page 1

IN THE MATTER OF: )  
)  
WATER QUALITY STANDARDS AND )  
EFFLUENT LIMITATIONS FOR THE ) No. R08-9  
CHICAGO AREA WATERWAY SYSTEM )  
AND THE LOWER DES PLAINES RIVER: )  
PROPOSED AMENDMENTS TO 35 ILL. )  
ADM. CODE PARTS 301, 302, 303 )  
AND 304. )

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AUG 07 2009  
STATE OF ILLINOIS  
Pollution Control Board

TRANSCRIPT OF PROCEEDINGS held in the  
above-entitled cause before Hearing Officer Marie  
Tipsord, taken before Tamara Manganiello, RPR, at  
160 North LaSalle Street, Room N-502, Chicago,  
Illinois, on the 28th day of July, A.D., 2009,  
commencing at 9:06 a.m.

1 of the exposure from noroviruses. And the other big  
2 issue with respect to the analytical methods was the  
3 ignoring of the potential enterovirus positive  
4 samples.

5 So in all, I believe that the  
6 biggest flaw in the analytical portion of the sample  
7 analysis portion of the risk assessment was that  
8 there would be an underestimate of the magnitude of  
9 the exposure to human pathogens in the water and  
10 therefore the risks would be biased low.

11 Q. Question three asks, in your opinion,  
12 why is MWRDGC's epidemiological study not a  
13 sufficient tool to assess the needs for  
14 disinfection?

15 A. First, let me say that I believe that  
16 the epidemiological study in general is being  
17 conducted in a very thorough way and I have  
18 absolutely no reason to doubt that the information  
19 that comes out of that study will be extremely  
20 useful especially as it relates to the secondary  
21 recreational activities.

22 I do believe, though, that there  
23 are some things that are not going to be determined  
24 through that study, one of them is the risk of

1 STATE OF ILLINOIS )  
2 COUNTY OF WILL ) SS.

3

4 I, Tamara Manganiello, CSR, RPR, do hereby  
5 certify that I reported in shorthand the proceedings  
6 held in the foregoing cause, and that the foregoing  
7 is a true, complete and correct transcript of the  
8 proceedings as appears from my stenographic notes so  
9 taken and transcribed under my personal direction.

10

11

*Tamara Manganiello*  
TAMARA MANGANIELLO, CSR, RPR  
License No. 084-004560

12

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16

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20 SUBSCRIBED AND SWORN TO  
before me this *7th* day  
of *August*, A.D., 2009.

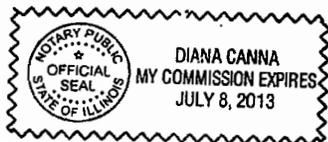
21

*[Signature]*  
Notary Public

22

23

24



# **Exhibit F**

www.chicagotribune.com/travel/chicago/ct-met-0228-tour-boat-threat-20100301,0,6200594.story

# chicagotribune.com

## Asian carp fight may close Chicago river

**The battle against the invasive species could shut down tour boats and all boat traffic up to four days a week**

By Joel Hood, Tribune reporter

11:54 PM CST, March 1, 2010

More than a million people each spring and summer pause to admire Chicago's architectural wonders and learn the history of this marvelous city with a relaxing boat tour up the twisting Chicago River and onto the placid waters of Lake Michigan.

But with the unofficial start of the boating season just weeks away, operators and owners of the most popular boat tours are bracing for a possibility that once was unthinkable — closure of the Chicago River.

As state and federal officials hunt down the elusive Asian carp, the U.S. Army Corps of Engineers is looking at the financial and environmental costs of closing navigational locks in Chicago waterways and shutting down the Chicago River to boat traffic as many as four days a week. Working under intense scrutiny from

Washington, D.C., and around the Midwest, the Army Corps intends to issue its recommendations this month and hopes to have them in place by April 1.

Some say closing the locks and river is critical to stopping Asian carp from entering the Great Lakes and threatening the region's multibillion-dollar commercial and recreational fishing industries. But boat operators warn that even a part-time closure would be "catastrophic" for the iconic tour boats and charter cruises that are a summertime staple in Chicago.

"Never in my wildest dreams did I think our company would be so severely threatened by a fish," said Chip Collopy, president of Shoreline Sightseeing tours, a family-run business that has navigated Chicago's rivers since 1939.

Collopy said his company has "a lot to lose." So does Chicago, after spending millions over the last decade to rebuild its riverwalk into a civic landmark.

"We are very concerned that closing the Chicago River to boats might greatly affect tourism and the local businesses that rely on it," said Kate Sansone, a spokeswoman for Mayor Richard . Sansone cautioned against predicting what the Army Corps will recommend.

Chicago's tour boats are caught in a win-at-all-costs battle against the Asian carp, a voracious and prolific invasive species that has destroyed native fish populations and disrupted ecosystems on its 15-year march up the Illinois River. DNA research indicates Asian carp are now poised to enter the Great Lakes, a nightmare scenario for biologists who fear the carp could irreparably harm the largest freshwater group of lakes in the

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<small><sup>^</sup> Fares found recently. Click for more info</small>			

world.

With so much at stake, a growing faction that includes six Great Lakes states and several prominent environmental advocacy groups have asked federal lawmakers and the U.S. Supreme Court to force Illinois to close locks near downtown Chicago and in the Calumet-Sag Channel to try to keep out Asian carp.

Last month, the Army Corps laid out three scenarios where the locks would be closed to boating and barge traffic; the options ranged from closing locks four days a week to less restrictive closures of one or two weeks a month.

Lock closures alone would be a significant blow to Chicago's tour and charter businesses, many of which travel between the lock near Navy Pier to gain access to Lake Michigan. But Army Corps officials are also debating whether to prohibit boating on the Chicago River when the locks are closed, the Army Corps' Major Gen. John Peabody said, giving wildlife biologists the space to go after Asian carp using nets, electrical current or even fish toxins.

"No definitive answer has been made yet, although we're considering these options very seriously," Peabody told a gathering in Chicago recently. "All options remain on the table."

Closing the locks is "going to kill everything in downtown Chicago," said Craig Wenokur, managing director of operations for Wendella boats, which has 140 employees and will begin its 75th year this month.

Wendella operates architectural tours, water taxis and several popular tour rides that take passengers from the Chicago River, through the controlling lock near Navy Pier, and onto Lake Michigan. Wenokur said closing the river and the lock would trigger layoffs at Wendella and at rival companies, reduce services, and likely force some businesses to shut down.

"Closing the lock and river is such a drastic step," said Terry Johnson of Chicago Line Cruises, who raises questions about the validity of the DNA research and the logic behind closing the locks to keep them out.

"This whole thing is based on speculation and politics," Johnson said. "We still haven't found a (Asian carp) within 40 miles of the lake, but we want to shut all this down?"

While the region's shipping and barge industry would surely suffer the biggest economic hit if locks are closed, the impact on tour boats would be a civic blow to the redeveloping riverfront, said Jim Farrell of the Illinois Chamber of Commerce.

"I don't think the city would have spent all those taxpayer dollars on the riverwalk if they had any indication of the prospect of lock closure," Farrell said.

Each of the dozen or so tour boat and charter cruise companies in Chicago employs a few dozen to several hundred people. Some boats host weddings and special events, and they provide tours that rank among the highlights for visitors to Chicago.

"How do you sell this wonderful city to visitors if you have to shut down the river?" Collopy asked. "You spend your life doing this, taking people on rides around the city, and you wake up one day and it could all be gone. I can't believe it."

*[jhood@tribune.com](mailto:jhood@tribune.com)*

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