

Electronic Filing - Received, Clerk's Office, July 11, 2008

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 11th Day of July, 2008, I filed with the Office of the Clerk of the Illinois Pollution Control Board the attached Metropolitan Water Reclamation District of Great Chicago's Motion for Leave to File a Reply in Support of Motion to Stay IPCB R08-9, copies of which are hereby served upon you.

Dated: July 11, 2008

**METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO**

By:



One of Its Attorneys

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PROOF OF SERVICE

The undersigned, a non-attorney, certifies, under penalties of perjury pursuant to 735 ILCS 5/1-109, at that true copies of the forgoing Notice of Filing and Metropolitan Water Reclamation District of Great Chicago's Motion for Leave to File a Reply in Support of Motion to Stay IPCB R08-9 were mailed via U.S. Mail, first class postage prepaid, from One North Wacker Drive, Suite 4400, Chicago, Illinois to All Counsel of Record on the attached Service List, on this 11th Day of July, 2008.



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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
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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)

**METROPOLITAN WATER RECLAMATION DISTRICT OF
GREATER CHICAGO'S MOTION FOR LEAVE TO FILE A REPLY
IN SUPPORT OF MOTION TO STAY IPCB R08-9**

The Metropolitan Water Reclamation District of Greater Chicago (the "District"), by its attorneys and pursuant to Ill. Adm. Code tit. 35 § 101.500(e), moves the Board for leave to file a Reply in Support of its Motion to Stay the above-captioned Rulemaking. In support of this Motion, the District states as follows.

1. On October 26, 2007, the Illinois Environmental Protection Agency ("IEPA") filed a Motion for Acceptance with the Illinois Pollution Control Board (the "Board") on IEPA's proposal to amend 35 Ill. Adm. Code Parts 301, 302, 303, and 304 ("IEPA's Proposal"). Generally, IEPA's Proposal will revise the designated uses for the Chicago Area Waterways System ("CAWS") and the Lower Des Plaines River and the criteria necessary to protect those uses.

2. On November 1, 2007, the Board granted IEPA's Motion for Acceptance, thereby initiating the public participation process required by Illinois law. Subsequently, the Board has held 11 days of public meetings and accumulated record material.

3. On June 12, 2008, the District filed a Motion to Stay the Rulemaking proceedings, in order to allow the District and other parties to finish and supply IEPA with various studies that will fill in multiple technical and analytical gaps in IEPA's proposed water quality standards.

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4. On June 25, 2008, the Environmental Law and Policy Center (the “Center”) filed a Response to the District’s Motion for Stay contesting a number of legal and factual issues raised by the District. In summary, the Center questions the accuracy of a number of the District’s citations to the record as deficiencies in IEPA’s proposed water quality standards, and challenges the legal justification for many of the District’s claims. Additionally, the Center’s Response introduces new evidence in the form of an affidavit from Dr. Peter Orris (“Orris Affidavit”) calling into question one of the studies that the District proposes to provide to IEPA. *See* Center’s Resp., Ex. A. This affidavit was not previously introduced into the record.

5. On June 26, 2008, the People of the State of Illinois (“People”) and the Southeast Environmental Task Force (“SETF”) filed separate Responses to the District’s Motion for Stay. The People’s Response generally challenges the timing and intent of the District’s Motion for Stay. People’s Resp., at p. 5. SETF’s Response accuses the District of bad faith in filing the Motion for Stay, and challenges some of the legal bases for the District’s claims. SETF asserts that the District intends to prevent environmental groups from having an opportunity to present evidence in this proceeding.

6. Also on June 26, 2008, Midwest Generation, L.L.C. (“Midwest Generation”) filed a Memorandum in Support of the District’s Motion for Stay generally “shar[ing] the District’s concern that [IEPA]’s proposal is fundamentally flawed and cannot be supported based on the many factual gaps and faulty assumptions that make up the record.” Midwest Generation’s Resp., at p. 1. Midwest Generation’s Memorandum identified “significant lack of data, information and analysis,” “significant deficiencies in the collection of environmental data and information” and IEPA “failure or unwillingness to consider other data and alternative approaches.” *Id.* at pp. 4-7.

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7. On June 27, 2008, the Chemical Industry Council of Illinois (“CICI”) filed a memorandum concurring with the District’s Motion for Stay and Midwest Generation’s supporting memorandum. CICI supports both a stay at this point in the proceedings and re-opening the stakeholder process to close the analytical and informational gaps in IEPA’s proposed water quality standards.

8. On June 30, 2008, IEPA filed a brief response to the District’s Motion for Stay essentially stating that it believes that it has met all filing requirements under the state rules, and that it adequately supported its proposed water quality standards.

9. Also on June, 30, 2008, the Stepan Company (“Stepan”) filed a memorandum that concurs with the District’s Motion for Stay and notes three additional analytical deficiencies in IEPA’s proposed water quality standards.

10. In total, Respondents offer new testimony and case law that they incorrectly believe support their contentions. Respondents also misstate many of the legal standards on which they base their claims. Additionally, Respondents mischaracterize much of the record that they contend supports denying the District’s Motion for Stay. Finally, Respondents accuse the District of bad faith in filing the Motion for Stay and present “cynical” views of the District’s intentions.

11. To avoid prejudice, the District should have an opportunity to address the Orris Affidavit, in order to rebut new assertions challenging one of the District’s studies. The District relied solely on the record compiled to date in its Motion to Stay, thus, the District has not had a chance to cross-examine Dr. Orris as to this new information before it was entered onto the record by the Center. It would be patently unfair for the Board to rely on Dr. Orris’ assertion without affording the District an opportunity to respond.

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12. Also, because the Respondents misstate the record, the relevant legal standards, and the intentions of the District in filing the Motion for Stay, it is necessary for the District to file a reply, to avoid prejudice that could arise if the Board relies on this information. Respondents' citations to the record are misleading and need to be clarified. Also, the District would face serious prejudice if the Board were to accept Respondents' misstated legal analyses. Finally, the District should have an opportunity to clarify its intentions with the Motion for Stay and reply to Respondents' accusations of bad faith.

13. Attached to this Motion as Exhibit A is a proposed Reply in Support of Motion to Stay that the District seeks to file.

WHEREFORE, the District requests that the Board grant this Motion for Leave to file the attached Reply in Support of Motion to Stay, and grant all other relief that the Board deems fair and just.

Respectfully submitted,

Metropolitan Water Reclamation District of
Greater Chicago

By:



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EXHIBIT A

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**METROPOLITAN WATER RECLAMATION DISTRICT OF
GREATER CHICAGO'S REPLY IN SUPPORT OF MOTION TO STAY IPCB R08-9**

The Metropolitan Water Reclamation District of Greater Chicago (the "District") respectfully submits this Reply in accordance with Ill. Adm. Code tit. 35 § 101.500(e), to address the Responses to the District's Motion to Stay that were filed by the Illinois Environmental Protection Agency ("IEPA"), the Environmental Law and Policy Center ("Center"), the Southeast Environmental Task Force ("SETF"), and the People of the State of Illinois ("the People") (collectively, the "Respondents"). As outlined in its Motion for Leave to File this Reply, the District's Reply is necessary to prevent prejudice to the District from the Respondents' challenges to factual accuracy and legal authority in the District's Motion to Stay, as well as to prevent prejudice from Respondents' introduction of an affidavit providing an opinion on one of the studies at issue in the Motion to Stay. Furthermore, this Reply is necessary to prevent prejudice from implicit accusations of bad faith raised by certain Respondents in their Responses. In support of this Reply and its Motion to Stay, the District states as follows:

INTRODUCTION

Despite the multiple, baseless accusations of bad faith and foot-dragging in the Responses to the District's Motion to Stay, no party has been able to submit properly supported evidence to undermine the substantial analytical problems with IEPA's proposed water quality standards for the Chicago Area Waterways System (the "CAWS") and the Lower Des Plaines

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River (“Lower Des Plaines”) that were pointed out in the District’s Motion. These problems will be alleviated if a stay is granted, since that would give time for the District and other parties to complete and submit reports to fill in IEPA’s technical and legal gaps.

From a review of their Responses to the District’s Motion, the Respondents seem to recognize that a stay would be proper if it would avoid wasting time, expenses, and resources. Indeed, the very purpose of the District’s Motion is to save the Board, and all of the parties, the needless expense of pushing forward with rulemaking proceedings that ultimately may have to be repeated once further information has been generated and discussed by the parties. In the coming months, the District intends to present over 20 witnesses on various issues at hearings. It is the District’s understanding that other regulated parties also intend to present a series of witnesses, and some of the Respondents are also expected to present witnesses. Based on the substantial number of witnesses that will then need to be questioned, it does not make sense to go forward with this process at this time if much of the further support necessary for this Rulemaking will be provided by the reports outlined in the District’s Motion. Thus, a stay would avoid incurring the unnecessary costs associated with the upcoming hearings, and will hold the Rulemaking in abeyance until the analytic gaps are filled with data and analysis from various forthcoming reports. Conversely, the alternative will result in a fruitless exercise of the Board’s and the parties’ resources.

Moreover, other than IEPA (who does not raise the issue), Respondents conveniently ignore that many of the reports identified in the District’s Motion were either **specifically requested by IEPA**, or are being conducted to address issues raised by the reports requested by

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IEPA. That is why the studies and reports are being developed at this time, and not earlier.¹ Additionally, Respondents fail to recognize that the District or other parties could not have known to initiate many of the studies at issue until IEPA proposed the water quality standards in October 26, 2007 and provided its insufficient data. Thus, Respondents' accusations of foot-dragging are completely unfounded.

IEPA has been developing new water quality standards for the CAWS since 2000, yet IEPA testimony shows that the standards still are not scientifically and legally sound. Any sense of urgency raised by Respondents should not be used as an excuse to approve scientifically and legally unsound water quality standards. Furthermore, it is disingenuous for Respondents to claim a sense of urgency for the Rulemaking at this time, because none of the Respondents took steps to expedite this process in the six-plus years before the District's Motion to Stay. And, contrary to Respondents' assertions, the District requested the stay as soon as was proper -- after it learned the full extent of IEPA's lacking support, analyses, and data.

ARGUMENT

I. Respondents fail to raise any issue that undermines the need for a stay to avoid a waste of time, expenses and resources.

The Respondents offer a number of specific challenges to the District's Motion to Stay that, as fully addressed below, do not demonstrate that the Motion to Stay is unfounded. The Respondents' basic common themes are that the Use Attainability Analysis ("UAA") process has been ongoing for six years, and that IEPA either has adequately supported its decisions on the record or does not need to support some of the decisions questioned by the District (*i.e.*, to require disinfection). The District does not dispute that IEPA "has answered numerous questions

¹ These arguments are especially striking considering that the Illinois Attorney General's Office represents IEPA, in various legal proceedings, and should know that its own client requested the reports to complete its analysis for the rulemaking.

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over a span of 10 hearing days with respect to its proposal. In fact, there have been over 2,500 pages of testimony.” IEPA Resp., at ¶ 11. The District also does not dispute that this Rulemaking has been ongoing for at least six years, and that IEPA has gathered much data during that time. However, a great volume of data is not a substitute for a complete analysis. Much of the testimony taken to date shows that IEPA has failed to perform the necessary technical and legal analysis over that six-year span to justify its proposal. Memoranda filed in this Rulemaking by Midwest Generation L.L.C. (“Midwest Generation”), the Stepan Company (“Stepan”), and Chemical Industry Council of Illinois (“CICI”) support the District in this claim. Thus, Respondents are wrong to assert that IEPA’s Rulemaking is technically and legally justified.

1. Respondents incorrectly present various legal standards

The Respondents assert that IEPA does not have the burden to justify the changed designated uses for the CAWS and the Lower Des Plaines, because there is a rebuttable presumption that all waters can support aquatic and recreational uses. Center’s Resp., at pp. 4-5. Respondents appear to blend two distinct legal issues into one grand exemption for IEPA. Such an exemption does not exist.

Respondents are correct in one respect: IEPA would not be required under federal regulations to justify water quality standards if they designated full fishable/swimmable uses consistent with Clean Water Act (“CWA”) section 101(a)(2) (33 U.S.C. § 1251(a)(2)). However, this streamlined process does not apply where the state is designating something *other than* those standards specified in the CWA. The regulations specifically require that states support designated uses other than full fishable/swimmable with a UAA. 40 C.F.R. § 131.10(j)(1). IEPA has made very clear that it is not assigning full fishable/swimmable

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standards for the CAWS and the Lower Des Plaines, because these waters cannot meet those standards:

While there has been improvement and potential exists for additional improvement; the UAA did not find the Lower Des Plaines River to be capable of full attainment of the aquatic life and recreational goals of the Clean Water Act for un-impacted waters in the foreseeable future.

Exhibit 1, IEPA's Statement of Reasons at p. 22. Hence, IEPA's proposal is subject to the UAA criteria, and as noted above, it is the state that must justify the changes to water quality standards -- not stakeholders. Furthermore, under Illinois law IEPA must consider the technical feasibility and economic reasonableness of all rulemakings. 415 Ill. Code R. 5/27(a).

Respondents also attempt to apply to this situation a USEPA policy that is entirely irrelevant: Under USEPA's "rebuttable presumption" approach, USEPA assigns full fishable/swimmable designated uses when exercising authority under CWA sections 303(c)(3),(4) (33 U.S.C. § 1313(c)(3),(4)), unless the state performs a UAA to support other designated uses. Respondents misapply this policy here by twisting this "rebuttable presumption" into somehow shifting the responsibility to the District to support a UAA. Respondents cite only Kansas and Idaho caselaw in support. However, those cases are not binding and are, ultimately, irrelevant. Both cases, *Idaho Mining Association, Inc. v. Browner*, 90 F.Supp. 2d 1078 (D. Idaho 2000) and *Kansas Natural Resource Council, Inc. v. Whitman*, 255 F.Supp. 2d 1208 (D. Kan. 2003), address situations where USEPA defaulted to full fishable/swimmable designated uses when the state either missed a deadline for developing water quality standards or failed to conduct a UAA to support its designated uses. First, these cases show that Respondents raise the rebuttable presumption prematurely, as IEPA has not even obtained approval from the Board for these standards let alone sought approval from USEPA. Also, in citing these cases Respondents overlook the fact that IEPA actually *is* conducting a

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UAA for these water bodies, which would rebut this presumption if it ever applied (assuming the UAAs are supportable). More importantly, these cases do not change the fact that a UAA remains the *state's* responsibility, never the District's. Hence, these cases have no negative effect on this Rulemaking or the Motion to Stay. If anything, these cases actually *support* the District's request for stay at this point in the Rulemaking, because they demonstrate the importance of an adequately supported UAA to ensure that IEPA's proposed standards will withstand USEPA scrutiny upon review.

In addition, the Respondents wrongly assert that Illinois statutes specifically require disinfection for vast stretches of the CAWS, because they are "protected waters." Center's Resp., at p. 7. The Respondents provide an incomplete citation that conveniently ignores important criteria for assessing whether a water body qualifies as "protected waters." The relevant Illinois statute actually defines "protected waters" as:

Protected waters are defined as waters which, due to natural characteristics, aesthetic value or environmental significance are deserving of protection from pathogenic organisms. Protected waters will meet one or both of the following conditions:

- 1) presently support or have the physical characteristics to support primary contact;
- 2) flow through or adjacent to parks or residential areas.

Ill. Adm. Code tit. 35 § 302.209(a). This language requires more than simple proximity to parks or residential areas, as the Respondents assert. Instead, the language demands that protected waters also must have "natural characteristics, aesthetic value or environmental significance" that justifies protection from pathogenic organisms. *Id.* To focus solely on the proximity to parks or residential areas, as Respondents have done, is misleading. While the proximity to parks and residential neighborhoods is one condition and characteristic of a protected water, it also must have natural characteristics, aesthetic value or environmental significance that justifies

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protection. There is no evidence that the CAWS meets such criteria and, thus, they are not protected waters.

Respondents go on to suggest that the District is wrong to even question whether the control measures recommended in the UAA would lead to 100% attainment of the standards in all parts of the CAWS. Respondents believe that IEPA “does not have an obligation to propose standards that can be met easily, let alone 100% of the time...[i]n fact, IEPA can propose and the Board can adopt standards that initially cannot be met in order to force improvements to existing technology.” Center’s Resp., at p. 10 (citing *Granite City Division of National Steel Co. v. IEPA*, 155 Ill. 2d 149, 182-83, 613 N.E.2d 719, 734 (Ill. 1993)). Respondents’ citations are misleading because they focus only on IEPA’s and the Board’s duty under state law to consider certain factors when developing all rules. See 415 Ill. Code R. 5/27(a). *Granite City* does not recognize or even address IEPA’s duty with respect to UAAs, which is to identify the *attainable* uses for a water body and to *remove unattainable uses*. See 40 C.F.R. § 131.10(g) (“States may remove a designated use which is not an existing use...if the State can demonstrate that attaining the designated use *is not feasible*.”) (emphasis added). Thus, this case is irrelevant to the issue of whether IEPA is allowed to assign water quality standards through a UAA that cannot initially be met.

Illinois and federal regulations do not define “attainable”; however, UAA-designated water quality standards must be met *at some point* in order to logically be considered attainable. IEPA testimony shows that they cannot guarantee that the control measures recommended in the UAA would lead to 100% attainment at some point in time, which means that the water quality standards are not attainable. Thus, the District properly questions whether IEPA can guarantee that the proposed water quality standards can be met -- which it cannot.

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Furthermore, to allow a state to assign water body uses that can never be met 100% of the time (*i.e.*, unattainable uses) would conflict with the total maximum daily load (“TMDL”) program. States are required to develop TMDLs for water bodies not currently meeting water quality standards (*i.e.*, impaired waters) “at a level necessary to implement the applicable water quality standards...” 33 U.S.C. § 1313(d)(1)(C); *see also* 40 C.F.R. § 130.7(c) (“For pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical [water quality standards]...”). If IEPA were to assign uses to the CAWS that could never be met 100% of the time, then it could never design a TMDL for a water body that would lead to achievement of water quality standards. This clearly is not allowable under the CWA.

2. Contrary to Respondents’ claims, the District accurately cited the record in its Motion to Stay and raised well-founded concerns for the proposed aquatic life uses.

In order to avoid restating large sections of the transcript in the Motion to Stay, the District paraphrased for the Board various transcript excerpts identifying analytical and technical holes in the support for IEPA’s proposed aquatic life standards. The District accurately paraphrased these excerpts. However, Respondents attempt to manipulate the District’s paraphrases with misleading characterizations of the record and citations that do not address the District’s points. Examples of Respondents’ misleading efforts are set out more fully below.

The Respondents claim that the District did not accurately characterize testimony from the record, when the District points out IEPA’s concession that it could not define a non-arbitrary line to distinguish between Aquatic Life Use A waters and Aquatic Life Use B waters. To support their assertion, the Respondents recite IEPA testimony describing how the Agency separated QHEI into two separate groups for Aquatic Use A and Use B waters. Center’s Resp., at p. 8. The District does not dispute that IEPA separated water body segments into two distinct

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groups; however, the District continues to believe that IEPA lacked a clear, justifiable line for identifying those groups. In support of the District's assertion, the full transcript excerpt cited in the Motion to Stay is as follows:

Mr. Andes [counsel for the District]: Well, I'm trying to understand why the decision was made to put [the line between Aquatic Life Use A waters and Use B waters] at 40 [QHEI score] instead of 46 [QHEI score]. If 46 was a sort of neat dividing line in terms of a goal, why 40 [was used] instead?

Mr. Smogor [IEPA witness]: I think we're just speaking *generally* there when we're saying *generally the range*...If you refer to [figure 5.2 in Attachment B to the Statement of Reasons] like Rob [Sulski] was earlier and look at the QHEI scores for the waters that are actually CAWS A, *that's about the general range of those scores...Exactly where that line is, I really couldn't tell you*, but we're talking about attainment in terms of relative ability to attain, we're saying upper Des Plaines island pool is above that Clean Water Act line, we're saying that CAWS A waters is somewhere below that Clean Water Act line, and relatively CAWS B and Branden pool waters are even a little bit lower than the CAWS A waters.

* * *

Mr. Andes: What was the basis for putting the waters with QHEI between 40 and 45 in A rather than B?

Mr. Smogor: *I think just relatively*, and again, Figure 5.2 in Attachment B shows this, that there is *kind of a break* in the QHEI scores. *That was the judgment that was made. There's a break in the QHEI scores and the waters that were placed into CAWS A generally have the lower QHEI scores* which represents that they can attain a higher biological condition than the waters that were put into the CAWS B Branden pool group. Whether or not that's exactly --- There wasn't any --- maybe this is getting better to your question. *There was not any exact line in QHEI scores which made that decision that I'm aware of.*

March 10, 2008 Hearing, transcript at pp. 28-30 (emphases added). The emphasized portions of this excerpt clearly identify that IEPA had no clear justification for Group A characteristics versus Group B characteristics. Instead, IEPA identified loose groupings of waters with a "general range of . . . scores." *Id.* at p. 28. Loosely grouping waters in this manner without a cutoff is arbitrary and capricious. Clearly defining the cutoff for Group A and Group B is very

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important to the District and other stakeholders, because the differences between groupings carry significant regulatory consequences. IEPA's admission that it did not identify a clear line of demarcation supports the District's point that IEPA needs to consider further data to fully assess this issue.

The Respondents next assert that the District erred in pointing out IEPA's concession that it does not have actual data on benthic and sediment conditions. The Respondents claim that the District is wrong because "IEPA stated repeatedly that it considered existing benthic and sediment data in the weight of evidence consideration. . . ." and that IEPA's witness "never conceded that these issues were ignored or overlooked by IEPA." Center's Resp., at p. 8. The Respondents misunderstand the District's assertion. The District does not assert that IEPA failed to consider the information that it had on benthic and sediment conditions when making the UAA decision. Instead, the District asserts that IEPA did not have adequate benthic and sediment data to make an informed UAA decision in the first place. The record demonstrates that IEPA admitted that it needs more data to support a complete evaluation of sediment impact on water quality:

Mr. Andes: I'm sorry, I'm trying to understand how the benthic data in particular was used, because my impression had been that it really wasn't used. It was looked at, but was it actually used in the process?

Mr. Essig [IEPA witness]: I don't think it was necessarily looked at in relation to the biotic potential because, as I explained, the index that was used is not looking at the entire macrovertebrate community like the fish index does. And there's more of a -- there has been documented relationships between how the QHEI was developed and the index of biotic integrity. So there's a lot of key relationships that have been developed for that or that have been seen in those two indices [sic]. So that is primarily used both in Ohio, I believe, and I think in the UAA process to indicate the biotic potential of the system. The macrovertebrate data was used primarily, I think in this case, and it's my interpretation of more of what's the current condition in relation to what that index was designed to show which is oxygen-consuming water quality problems like BOD and ammonia. That's

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primarily what that index indicates. It doesn't indicate habitat relationships, per se.

Mr. Andes: So the benthic data was considered in defining the current condition, ***but not the attainable condition***. Is that accurate?

Mr. Essig: I think that that might be a fair assessment.

Mr. Andes: And the sediment data.

Mr. Sulski [IEPA witness]: ***The sediment quality data was looked at, everything that the contractors could get their hands on.*** But it's again, sediment determination or -- determinations of sediment impact are another weight of evidence, but even more complex than water quality and fish inhabitat [sic]. ***And the data that we had was mostly bulk chemistry. There are some things you can do with -- if you have other parameters along with that bulk chemistry, but in most cases those were missing.*** Then you have to look at the physical condition of the sediment. So, you know, in a lot of cases there wasn't -- there weren't SIB analysis designating what the particle sizes of the different sediments are. Then you have the whole biological realm, and then the biochemical realm; biochemical realm being bioaccumulation. The biological realm being, you know, what is the whole sediment toxicity or what is the poor water sediment toxicity. ***And all of that sort of information is needed to really make a determination. So the bottom line is there wasn't enough data to make a real determination on the impact of sediments on any of these -- in any of these waterways.***

March 10, 2008 Hearing, transcript at pp. 21-23 (emphases added). As demonstrated in the above testimony, IEPA conceded that it did not have adequate benthic and sediment data, again showing that IEPA's UAA analysis is not complete and is in need of supplemental information.

The Respondents also accuse the District of "misrepresenting the testimony regarding fish spawning, claiming that IEPA conceded there was no data showing that spawning occurs in these waterways." Center's Resp., at p. 9. The District misrepresents nothing in its Motion to Stay, but states a simple fact from the record that IEPA admits it has nothing but inferences of fish spawning based on the presence of small fish:.

Mr. Andes: On H is there data or evidence of fish spawning, and this is a little unclear when we say in all of the waters proposed to be designated ALUA. I would ask for each of the waters, designated as

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ALUA. *I would ask for each of the waters, designated as ALUA, is there data or evidence of fish spawning.*

* * *

Mr. Smogor: Evidence of? I think there is. It's based on – We have data from MWRB fish data of 2001 through 2005 that we looked at, and based on small sizes of some of those data – the data basically goes site by site, collection site. They sample the fish and they let you know how many of each type or species of fish, and they also create – they also provide some weights and size ranges. *So based on the small sizes of some of those individuals captured, one could deduce that there must be some kind of spawning going on in that – in those waters because of the small sizes of fish present.* These are small sizes compared to their adult size of species. *In terms of the specifics, again, I don't have anything right in front of me, but there is presence of young fish in those waters.*

* * *

Mr. Andes: Yes. We're talking a lot about spawning, but I seem to recall a discussion about yesterday, *correct me if I'm wrong, but yesterday there wasn't any actual evidence of spawning, it was simply that there were fish collected that were smaller than normal; am I right?*

Mr. Smogor: If you're referring to, I think, some of my testimony yesterday, you asked is there evidence of spawning in [CAWS] and maybe I didn't use the word inferred, but *there was inferred evidence of spawning, which is not – I agree that's not direct observations of fish spawning. But the inference is that if small individuals do occur across several species, it's likely that they did occur – that they did spawn somewhere in the system to allow the occurrence of those small sub-adult individuals.*

March 10, 2008 Hearing, transcript at pp. 74-75 (emphases added); March 11, 2008 Hearing, transcript at p. 232 (emphases added). In other words, IEPA does nothing to distinguish between sub-adult individuals and simply small fish. This approach is fundamentally flawed, because it is based on the unsupported assumption that all small fish are young and the result of spawning. The District believes that IEPA's inferential approach is not a substitute for evidence, and that proof of *actual fish spawning* is important if IEPA claims that the CAWS can and does support an aquatic life use. This is yet another example of an issue on which IEPA is in need of supplemental data to complete its UAA analysis.

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The Respondents also claim that despite the District's contentions, IEPA did not concede that it was required to look at sediment data to evaluate habitat issues and failed to do so. Respondents cite testimony from IEPA witness Mr. Chris Yoder in support, indicating that sediment data "was not appropriate to factor into a QHEI study because the QHEI measures physical habitat, not chemical parameters . . ." and that chemical parameters "could include sediment toxicity data, but did not state that this data was 'necessary' as the MWRDGC suggest." Center's Resp., at p. 10. This again confuses the issue raised by the District, which is that sediment data showing poor sediment quality is important to identifying physical habitat, even if it is not directly important to the QHEI scores used by IEPA. In other words, the District asserts that it is prudent for IEPA to consider *actual sediment data* in addition to the QHEI scores. Mr. Yoder agreed that sediment data is important for "complete" analyses of physical habitat, even though they did not use it for purposes of the QHEI scores:

Mr. Andes: Okay. On the issue of sediment, and we will provide data on this issue eventually for the record. Sediment samples from the CAWS exhibit old sheens, odors, hydrogen sulphate [sic] odors, other evidence of poor quality. How if at all, can those be...accounted for in the QHEI?

Mr. Yoder [IEPA witness]: Well they're not. And I'm not -- it's not appropriate. That would be accounted for through some type of chemical analysis.

Mr. Andes: ***But they are – those – the poor sediment quality would be relevant for organisms; correct?***

Mr. Yoder: *Yes.*

Mr. Andes: ***In terms of habitat, it would affect the habitat quality?***

Mr. Yoder: ***Well, it would affect the macro suitability.*** But, I mean, the intent of the QHEI is to evaluate physical habitat not chemical habitat. ***And it's intended that if we were to do a complete evaluation of the system, like the CAWS, we would absolutely have to have chemical data to go along with that.***

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February 1, 2008 Hearing, transcript at pp. 181-182. Thus, as admitted by Mr. Yoder (*id.*), sediment chemistry should have been accounted for to conduct a complete UAA evaluation. This is yet another flaw in IEPA's UAA analysis.

The Respondents next argue that the District wrongly claimed an IEPA admission that it does not have data to support its assertion that sediment quality is improving. Center's Resp., at p. 10. Mr. Sulski's testimony clearly disagrees with Respondents and supports the fact that IEPA did not have actual data showing sediment quality improvement:

Mr. Sulski: That [sediment quality is improving is] another whole story. Do you want me to reiterate that story too?

Mr. Andes: Let's go through that again...

Mr. Sulski: Okay. So the question is the sediment improving and how is it?

Mr. Andes: Right.

Mr. Sulski: Okay. Yes. We *believe* the sediment is improving for a number of factors, for a number of reasons. No. 1, the *volume has gone down* with TARP.

Mr. Andes: The volume of?

Mr. Sulski: Solids that create sediment, additional sediment. So the volume has gone down. *The quality of those additional contributions have improved because of various programs ranging from storm water programs which, you know, are designed to improve quality of sediments to pretreatment programs which is designed to improve the solids or quality within the wastewater.*

Mr. Andes: *Those are qualitative conclusions. Am I right? You don't have any data – Do you have any data on those issues?*

Mr. Sulski: I mean, I've got data within the Illinois EPA that the sludge quality and the quality of solids going into the wastewater treatment plants has improved over time with the pretreatment program. In fact, the District has a program now where they distribute their sludge basically in an unrestricted manner because of the cleanliness of it. But back to the question, *other reasons that lead us to believe that the situation is improving for sediments is some of the programs that we've undertaken to reduce nonpoint source contamination such as – well, I mean, the Agency collects mercury thermometers and gives away alcohol thermometers.* We have household hazardous waste collection programs which removes items

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that could be dumped down sewers. *I mean, there's a whole bunch of programs that have been in place for a while that would – that are geared for improving conditions and sediment is the sink for a lot of those things in the past.*

Mr. Andes: *But the sediment data that is in the UAA report was not used in deciding whether sediment quality is improving. Am I right?*

Mr. Sulski: The sediment data in the report was not used to invoke a UAA factor. We couldn't. We didn't have enough information.

Mr. Andes: That wasn't my question. *My question was the sediment data used in the determining whether the sediment quality is improving in part of this analysis?*

Mr. Sulski: *Not that I'm aware of.*

March 10, 2008 Hearing, transcript at pp. 24-26 (emphases added). This testimony shows that IEPA used only qualitative inferences that sediment quality is improving, rather than actual sediment data. IEPA needs actual data to complete a proper UAA.

3. Contrary to Respondents' claims, the District accurately cited the record in its Motion to Stay and raised well-founded concerns for the proposed recreational uses.

Respondents also attempt to rebut the District's recreational standard claims by mischaracterizing the record and misdirecting the Board's attention. As shown below, the Board should disregard Respondents' attempts.

Respondents again assert that the District "distorts and misstates both the applicable standard and the record," because Respondents believe "[t]he fact that IEPA does not have the 'proper indicator to assure protection of recreational users' . . . is completely irrelevant given that IEPA did not propose an ambient pathogen standard applicable to any portion of the CAWS." Center's Resp., at p. 11. In other words, Respondents believe that IEPA need not justify its standards, due to the fact that it "proposed effluent standards that, if complied with by [the District], will assure that it disinfects its effluent so that pathogens that its plants would otherwise discharge during dry weather conditions will not be alive to make people sick." *Id.* In

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this case, Respondents wish to apply a test akin to the “ends justify the means” to the UAA process, whereby requiring disinfection allows IEPA to skip the UAA process entirely. This is not allowed by the regulations and should be given no credence here.

IEPA cannot presume that disinfection is proper in all cases to protect public health; instead, the Agency must identify the appropriate levels and treatment necessary to protect public health specific to the CAWS. The District does not believe that IEPA can justify the proposed recreational standards without a clear indicator of what is necessary to protect recreators. Without a proper indicator for protecting public health, IEPA has no baseline to analyze whether public health actually will be protected by the proposed water quality standards (and the recommended treatment). Hence, because IEPA did not identify the proper public health indicators, it has not justified the recreational use changes for the CAWS. This further confirms the need to stay the Rulemaking, to allow the District and others to provide information that will help IEPA identify the proper indicator for public health.

Additionally, Respondents claim that the proposed recreational uses are safe and that IEPA has adequately demonstrated that fact. Center’s Resp., at p. 11. In support, Respondents cite a portion of the record that focuses entirely on the wrong issue; thus, it should not impact the Motion to Stay. Respondents’ excerpted testimony addresses bacteria levels for safe recreation in the CAWS; whereas, the dangerous activity at issue discussed in the District’s Motion to Stay is recreating in the CAWS within proximity of heavy large boat and barge traffic. The excerpted language below, and cited in the Motion to Stay, shows that IEPA concedes that recreation in the CAWS is “not advisable” and “may not be safe:”

Mr. Andes: Isn’t there a risk that by designating this way [recreational use] and sort of stating that it’s okay to have incident contact recreation [on the water body] we’re promoting the dangerous activity?

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Mr. Twait [IEPA witness]: I don't know that the Agency's promoting the use of the water. I think the Agency is protecting the uses – or the recreators.

Mr. Andes: Is it more likely that by protecting that use you are making it more likely that more people will do it?

Mr. Twait: I don't know: *There's people out there doing it now when it's definitely not advisable.* But is it – The question that we've relied on – or the facts that we've relied on is there's a boat dock – or a boat launch there that can have small craft into that section of water *even though it, as you say, may not be safe.*

January 29, 2008 Hearing, transcript at p. 222 (emphases added). These safety concerns call IEPA's recreational use designation into question.

Respondents next claim that the District needs to explain why IEPA must analyze the feasibility of various disinfection technologies. Center's Resp., at p. 12. Further, the Respondents claim that disinfection is appropriate by default and that the District "cannot claim with a straight face that it is not capable of meeting this effluent standard, since a huge number of Illinois dischargers as well as almost all of the major municipalities in North America do so." *Id.*; see also SETF's Resp., at p. 8. Despite Respondents' broad and dismissive statements, IEPA and the Board remain obligated to consider the technical feasibility and economic reasonableness of the proposed water quality standards under Illinois state law. See 415 ILCS 5/27(a). Contrary to Respondents' assertions, IEPA and the Board cannot simply apply a general template that comes to the default conclusion that disinfection is appropriate under all circumstances, because the technical feasibility and economic reasonableness are inherently site-specific determinations.

In this case, the District operates the largest wastewater treatment facility in the world, along with two other extremely large facilities, and would bear significant costs and technical difficulties to disinfect the several billion gallons of water that come through its facilities every day. The fact that other systems have historically incorporated disinfection is immaterial to this

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particular situation, considering that the economic and technical considerations for the District's facilities are significantly different from other smaller facilities that incorporate disinfection. Also, the proposed water quality standards and disinfection requirements should not automatically be presumed to be justified without fully considering the economic and technical impacts. Hence, when IEPA admits that it did not evaluate other technologies, it calls into doubt whether IEPA met its obligation to consider the technical and economic impacts of the proposed water quality standards. This failure is yet another flaw in the UAA that can be remedied with further study.

Respondents inaccurately claim that, contrary to the District's claim in the Motion to Stay, IEPA actually considered combined sewer overflows ("CSOs") and municipal separate storm sewer systems ("MS4s") as other sources of pathogens to the CAWS. In support, Respondents note that IEPA "decided that the volume and frequency of discharges from these intermittent sources [*i.e.*, CSOs and MS4s] is relatively small in proportion to the large and constant flow of effluent discharged into the CAWS from wastewater treatment plants." Center's Resp., at p. 12. The record belies the Respondents' implication that CSOs and MS4s are less important to the CAWS, or that IEPA adequately considered impacts from those sources:

Mr. Andes: Question B. ***Did IEPA take into account the impacts of all of the sources of microorganisms to the CAWS, including lingering effects of wet weather, in their assessment of water quality improvement and risk reduction expected to result [from] effluent disinfection?***

Mr. Twait: ***We did not look at all sources.***

* * *

Mr. Andes: In terms of the risk, and I believe that Mr. Sulski talked about reducing risk. ***In fact, the significant issue in terms of bacteria in water bodies is the number of combined sewer overflow dischargers. Am I right?***

Mr. Twait: ***Yes.***

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Mr. Andes: Which I believe we talked about an average of, I think the testimony last time, was an average of 15 times – 15 year times about 300 different overflow points.

Mr. Twait: Yes.

Mr. Andes: Okay. That also – *So this proposal doesn't address that at all. So those sources of bacteria are unaddressed by this proposal?*

Mr. Twait: *They are unaddressed by this proposal, yes.*

Mr. Andes: *And any sources of bacteria from municipal separate storm sewer systems, MS4s, are also unaddressed by this proposal?*

Mr. Twait: *Correct.*

* * *

Mr. Andes: *But the contributions of bacteria from other sources, particularly during wet weather events from MS4s and from CSO discharges which are not addressed by the proposal, the agency hasn't really done any kind of analysis to the extent of the risk caused by those discharges. Am I right?*

Mr. Sulski: *The extent of the risk, not.*

January 29, 2008 Hearing, transcript at p. 192 (emphases added); April 23, 2008 Hearing, transcript at pp. 76-77, 79 (emphases added). These excerpts cannot more clearly demonstrate that IEPA failed to consider these wet-weather sources in this Rulemaking. By not considering inputs from CSOs and MS4s in this Rulemaking, IEPA has failed to conduct a complete analysis and cannot justify disinfection by the District.

Respondents assert that IEPA need not analyze the costs of meeting the proposed dissolved oxygen (“DO”) standard. Center’s Resp., at p. 13. As noted above, Illinois law requires the IEPA and the Board to consider the technical feasibility and the economic reasonableness of each rule they promulgate. Thus, the District is warranted in questioning whether IEPA considered the economic reasonableness of requiring the District to meet DO levels. And, when IEPA admits that it did not consider the costs of complying with the proposed DO standards for the Cal-Sag Channel or the Sanitary and Ship Canal, it admits that it has not met its obligations under state law:

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Mr. Andes: Stop for a minute. *The key point is the Agency has not assessed what the cost would be to comply on Cal-Sag Channel and the Sanitary Ship Canal with the new proposed standards of DO.*

Mr. Sulski: *Correct.*

April 23, 2008 Hearing, transcript at p. 184.

4. The affidavit provided by Respondents is generic and not compelling to deny the District's Motion to Stay.

Respondents assert that the Board should not stay the Rulemaking until the District completes its studies, because Respondents have an affidavit stating that *one* of the District's studies is not grounds for staying the Rulemaking. Center's Resp., at pp. 13-16. Respondents completely ignore the totality of the District's Motion to Stay in disputing only one of the numerous studies that the District believes are required to adequately support the Rulemaking. The District does not rely solely on the epidemiological study as the grounds for requesting the delay; rather, it is the total information gathered from the studies mentioned in the District's Motion to Stay that the District believes is necessary. Furthermore, testimony from a party uninvolved with the Rulemaking or the study at issue is not persuasive evidence that the District's request for a stay is unfounded. Dr. Peter Orris' affidavit only cites to general pathogenic impacts on water bodies, without addressing IEPA's significant shortcomings in IEPA's proposal or the significant data that will result from the District's full array of studies. Therefore, Dr. Orris' affidavit should be given very little if any weight.

II. A stay of the Rulemaking is necessary to save the Board and the parties time, expenses and resources, and will not cause environmental harm.

According to Board authority, it is within the Board's sole discretion to grant or deny stays. *Israel-Gerold's v. IEPA*, PCB No. 91-108 (July 11, 1991). In determining whether a stay is appropriate, the Board will examine such factors as whether a stay will help avoid wasting time, expenses, and resources; whether a stay will avoid practical difficulties; whether a stay will

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avoid duplicative efforts by the Board; and whether a stay will assist the Board in making the appropriate determination. *Midwest Generation EME, LLC v. IEPA*, PCB 04-216 (November 15, 2007); *In the Matter of: Petition of Cabot Corporation for an Adjusted Standard from 35 Ill. Adm. Code Part 738, Subpart B*, AS 07-06 (August 9, 2007). While the parties attempt to distinguish the case law cited by the District, the parties do not dispute the principle that a stay would be appropriate to avoid wasting time, expenses and resources. Thus, because a stay here would serve the purpose of avoiding needless waste, the Board should grant the District's Motion.

Respondents' claims that a stay in this Rulemaking would waste time and money (People's Resp., at 1) are unfounded; in fact, a stay would actually save expenses and resources. Contrary to Respondents' assertions (People's Resp., at p. 4; SETF's Resp., at pp. 6-7), staying the Rulemaking does not require that IEPA, the Board and stakeholders completely duplicate the effort expended by everyone to this point. Instead, a stay simply stops the process at its current point and holds the proceedings in abeyance while two things happen: (1) the District and other parties complete and submit the reports outlined in the District's Motion and in the various filings supporting that Motion; and (2) the stakeholder process resumes, so the parties can discuss and try to resolve as many of the outstanding issues as possible. The Rulemaking proceeding would then recommence.

Respondents also take the unfounded stance that all hearings held thus far would go to waste if the Board grants a stay; when, in fact, all of the hearings have been recorded, and testimony will be preserved for consideration when appropriate. Nevertheless, this information may eventually go to waste if the Rulemaking hearings continue without resolving the significant holes in IEPA's UAA data, and then fails to withstand the Board's scrutiny. In that case, the

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District, IEPA, and many others will have expended great time and funds, only to have to restart the development and Board review processes. Such restarts are likely to result in additional costs and expenses; as opposed to staying the Rulemaking, which would *avoid* IEPA and the Board from having to restart the process. Therefore, the Board can avoid all of these potential time- and money-wasting possibilities by allowing the District and other parties to submit reports and data before the Rulemaking continues that could dramatically increase the Rulemaking's chances for success.

Respondents' assertions also seem to imply that without a final ruling on the proposed water quality standards, citizens will be at risk of environmental harm. *See* SETF's Resp., at pp. 11-12; People's Resp., at pp. 5-6. However, Respondents ignore the fact that the status quo remains the same if this Rulemaking is stayed and current environmental protections for the water bodies will not be somehow abandoned if the Board stays this Rulemaking. Dischargers would continue to be subject to the same water quality requirements that currently apply and that have been applied by for more than twenty years. Permitting also will continue on these water bodies as it did prior to and during the instant Rulemaking, thus protecting aquatic life and citizens from discharges that are not in compliance with water quality and technology-based standards. Thus, there is no increased environmental harm associated with the District's Motion to Stay.

Moreover, the discussions about the proposed water quality standards had been ongoing for years prior to IEPA initiating this Rulemaking, so it is disingenuous for Respondents to now push for an urgent resolution. The state of the environment in the CAWS will be no different during a stay of this Rulemaking than it has been over those years -- a time span where Respondents never acted on the asserted urgency that is now being claimed.

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III. The District's Motion is not being used as a tactical ploy to delay the Rulemaking.

In response to the District's Motion, Respondents have accused the District of litigious gamesmanship aimed at delaying the issuance of final water quality standards. These assertions are unfounded and spurious. For instance, Respondents assert that the District should have conducted the studies at issue in the Motion to Stay sooner. *See People's Resp.*, at p. 6. The most troubling aspect of this assertion is that Respondents completely ignore the fact that a number of these studies are being conducted by the District at IEPA's request, or as necessary follow-up to studies conducted at IEPA's request. For example, as IEPA requested in a letter to the District:

To adequately evaluate the options for reducing risk and protecting the existing and designated uses identified through the UAA, I am requesting that MWRD provided IEPA with sound engineering estimates to construct disinfection facilities at the North Side Plant. . . . I am requesting that MWRD also provide IEPA with sound engineering estimates for implementing disinfection at the Calumet and Stickney WRPs.

See Exhibit 2, Correspondence from IEPA to the District, dated March 12, 2004, pp. 3-4; *see also* Exhibit 3, Correspondence from the District to IEPA, dated May 21, 2004; Exhibit 4, Correspondence from the District to IEPA, dated October 18, 2007 (The District's progress report shows the status of the District's studies that were requested by IEPA, including information showing that studies will not be finalized until future dates.); Exhibit 5, Project Meeting Notes January 30, 2003; Exhibit 6, Memorandum: Minutes for the April 27, 2004 Stakeholder Advisory Meeting (April 30, 2004) at p. 17; Exhibit 7, Memorandum: Minutes for the January 27, 2004 Stakeholder Advisory Meeting (February 18, 2004) at p. 7; Exhibit 8, Memorandum: Meeting Minutes for the July Stakeholder Advisory Committee (July 28, 2003) at p. 7. All such studies requested by IEPA were initiated in good faith and with the understanding that IEPA needed certain of these studies to fully develop its UAA. For reasons

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unknown, IEPA proceeded to propose the changes without waiting for the District to complete the requested studies. Thus, the District can hardly be blamed for the timing associated with these particular studies.

Furthermore, the District started many of the remaining studies at issue in the Motion to Stay as soon as it became evident that IEPA was going to propose the new standards without much of the information needed to justify them. IEPA initiated discussions relating to the proposed water quality standards in this case in 2002 with the full involvement of the District and other stakeholders. Throughout the course of the discussions, the District and other interested parties were working with IEPA to develop the necessary justification for the water quality standards. Hence, the studies were not necessary at that point, because the District believed IEPA would continue to conduct discussions, gather data, and develop sufficient technical and legal justifications for the standards. However, later in the Rulemaking it became evident that IEPA had not yet conducted many of the studies that would provide the necessary data to support the proposed water quality standards. It was at this point that many of the studies were initiated by the District, which is fully appropriate timing.

Moreover, Respondents appear to incorrectly presume that the District was obligated to have conducted the studies in the first place, and that failure to expeditiously do so is grounds for denying the Motion to Stay. *See* Center's Resp., at pp. 4-5. Respondents severely confuse the District's responsibilities with that of IEPA in conducting this Rulemaking. IEPA is the one that is attempting to change the designated uses for the water bodies, not the District. According to the regulations, IEPA has the responsibility to justify UAAs with information supporting its decision. 40 C.F.R. § 131.10(g), (j). Thus, despite the District's desire to supplement the Rulemaking with studies to fill in important analytical gaps, it has no *obligation* to conduct such

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studies under the UAA regulations. Hence, the District can hardly be accused of lethargy or foot-dragging on these studies that it undertook voluntarily.

In addition, the Respondents unjustifiably accuse the District of less-than-honorable intentions in the timing of its Motion to Stay. *See* SETF's Resp., at pp. 9-11. This accusation also is unfounded. The District could not have known of the full extent of IEPA's analytical gaps until, at the earliest, the proposed water quality standards were submitted to the Board on October 26, 2007. That is, the District could not have known for certain that IEPA was relying on insufficient data and improper analyses until the proposed rule was actually issued. Moreover, it was only after IEPA issued the proposed water quality standards, that it became apparent that IEPA was departing from what its consultants had submitted during the discussions with the parties prior to the issuance of the proposed standards. And, even though the District was able to partially identify that there were significant analytical problems with the proposed water quality standards after November 1, 2007, the District believed that IEPA's testimony would clarify the analytical gaps that appeared in the documents. This was not the case. Instead, as thoroughly discussed above and in the District's Motion, IEPA's testimony over the ten days of hearings in 2008 made it clear that IEPA had not conducted an analysis for the proposed water quality standards that could be scientifically or legally justified. It was at that point that the District filed its Motion to Stay. According to this timeline, the District could not have moved for a stay any earlier than when it fully realized that the proposed water quality standards were not supported (*i.e.*, the middle of 2008).² Accordingly, the timing of the reports are not "of the District's own making" as suggested by Respondents. People's Resp., at p. 3.

² The People state that it "is therefore surprising that the District has chosen to file a motion to stay rather than file expert testimony." People's Resp., at p. 3. The People have mistakenly concluded that the District is pursuing a stay instead of filing expert testimony. If the Motion to Stay is denied, or not acted upon soon, the District fully

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Finally, the District is not “isolated” in its claims as Respondents suggest. Midwest Generation, Stepan and CICI flatly concur with the District’s Motion to Stay as necessary to fill in major analytical gaps in IEPA’s analysis. In fact, Midwest Generation and Stepan point out additional significant examples of IEPA’s analytical shortcomings, including IEPA ignoring significant valid proposals for addressing thermal issues on the water bodies. *See* Midwest Generation’s Memorandum at pp. 9-12; Stepan’s Concurrence at pp. 1-2. Hence, the District and other parties have legitimate claims to stay this Rulemaking stemming from demonstrated inadequacies in IEPA’s proposed water quality standards. Respondents are wrong to assert that the District is single-handedly, or in concert with other stakeholders, scheming to scuttle the Rulemaking.

intends to file expert testimony, and will be producing over 20 witnesses to testify as to various issues. It is our hope, however, as explained in the Motion and this Reply, that this major effort for the District and all other stakeholders can be avoided, or at least reduced, by resuming the stakeholder process, reducing the number of witnesses that are required and incorporating the results of the myriad ongoing studies into the rulemaking process as soon as they are available.

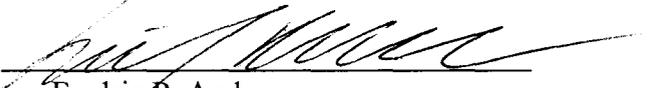
CONCLUSION

For the foregoing reasons, the District requests that the Board grant the relief requested in the District's Motion to Stay, and for all relief the Board deems fair and just.

Dated: July 11, 2008

Respectfully submitted,

METROPOLITAN WATER
RECLAMATION DISTRICT OF
GREATER CHICAGO

By: 

Fredric P. Andes
Erika K. Powers
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Barnes & Thornburg LLP
1 North Wacker Dr.
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Chicago, Illinois 60606
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Attorneys for
Metropolitan Water Reclamation
District of Greater Chicago

EXHIBIT 1

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:)
PROPOSED AMENDMENTS TO 35 ILL.)
Adm. Code Parts 301, 302, 303 and 304)
)

R08-
(Rulemaking - Water)

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OCT 26 2007
STATE OF ILLINOIS
Pollution Control Board

STATEMENT OF REASONS

The Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") hereby submits its Statement of Reasons for the above captioned rulemaking to the Illinois Pollution Control Board ("Board") pursuant to Section 27 of the Environmental Protection Act ("Act") [415 ILCS 5/27] and 35 Ill. Adm. Code 102.200 and 102.202.

I. STATUTORY BASIS AND LEGAL FRAMEWORK

A. Environmental Protection Act

Section 5(c) of the Act gives the Board "authority to act for the State in regard to the adoption of standards for submission to the United States under any federal law respecting environmental protection. Such standards shall be adopted in accordance with Title VII of the Act and upon adoption shall be forwarded to the Environmental Protection Agency for submission to the United States . . ." 415 ILCS 5/5(c)(2006). The Agency is given the responsibility under Section 4(l) of the Act to transmit the standards adopted by the Board to the United States Environmental Protection Agency ("U.S. EPA") for approval where required by federal law. 415 ILCS 5/4(l)(2006).

most extensive stakeholder involvement efforts undertaken by the Agency. Planning meetings with interested stakeholders were held first on March 8, 2000. A meeting in Joliet which included a boat tour of Lower Des Plaines River, was held on May 17, 2000. The first formal UAA stakeholder group meeting with the UAA contractors took place on December 15, 2000. See Attachment E for a detailed timeline of meetings of the UAA stakeholder's advisory groups and Attachment F for a list of stakeholder's advisory group members.

The UAA for Lower Des Plaines River identified the water quality problems of Lower Des Plaines River and suggested remedies particular to each problem. It is clear from the UAA that Lower Des Plaines River continues to be a highly modified water body that does not resemble its pre-urbanized state. The main goal of the UAA was to find an ecologically and recreationally attainable state that would as closely as possible approach the aquatic life and recreational goals of the Clean Water Act without causing an adverse widespread socio-economic impact. (See Attachment A at 9-1). The UAA found that the water quality of the river has significantly improved since the 1970s when the Secondary Contact and Indigenous Aquatic Life Uses were designated by the Board for this waterbody. While there has been improvement and potential exists for additional improvement; the UAA did not find the Lower Des Plaines River to be capable of full attainment of the aquatic life and recreational goals of the Clean Water Act for un-impacted waters in the foreseeable future. Id.

E. Use Attainability Analysis for the Chicago Area Waterway System

The UAA for the CAWS began in September 2002 by the convening of a Stakeholders Advisory Committee. This group comprised a cross-section of the community likely to be impacted by any proposed rule changes including environmental groups, local governments, specific industries, industry trade associations and regulatory agencies. See Attachment E for a

EXHIBIT 2

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR

RENEE CIPRIANO, DIRECTOR

217-558-2012

March 12, 2004

Mr. John C. Farnan, P.E.
General Superintendent
Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street
Chicago, IL 60611-3154

Subject: Evaluation of Management Alternatives for the Chicago Area Waterways

Dear Mr. Farnan:

At the December 2003 and January 2004 Stakeholder Advisory Committee (SAC) meetings for the Chicago Area Waterways (CAWS) Use Attainability Analysis (UAA), we began the process of identifying existing and potential recreational and aquatic life uses for the fourteen different CAWS water segments identified below:

- 1) Upper North Shore Channel
- 2) Lower North Shore Channel
- 3) Upper North Branch Chicago River
- 4) Lower North Branch Chicago River
- 5) Chicago River
- 6) South Branch Chicago River
- 7) South Fork (Bubbly Creek)
- 8) Chicago Sanitary and Ship Canal
- 9) Calumet-Sag Channel
- 10) Little Calumet River West
- 11) Little Calumet River East
- 12) Grand Calumet River
- 13) Calumet River
- 14) Lake Calumet

The following new recreation and aquatic life designated uses are under consideration for CAWS:

- 1) General Warm-water Aquatic Wildlife
- 2) Modified Warm-water Aquatic Wildlife
- 3) Limited Warm-water Aquatic Wildlife
- 4) Whole-body Contact Recreation

ROCKFORD - 4302 North Main Street, Rockford, IL 61103 - (815) 987-7760 • DES PLAINES - 9511 W. Harrison St., Des Plaines, IL 60016 - (847) 294-4000
ELGIN - 595 South State, Elgin, IL 60123 - (847) 608-3131 • PEORIA - 5415 N. University St., Peoria, IL 61614 - (309) 693-5463
BUREAU OF LAND - PEORIA - 7620 N. University St., Peoria, IL 61614 - (309) 693-5462 • CHAMPAIGN - 2125 South First Street, Champaign, IL 61820 - (217) 278-5800
SPRINGFIELD - 4500 S. Sixth Street Rd., Springfield, IL 62706 - (217) 786-6892 • COLLINSVILLE - 2009 Mall Street, Collinsville, IL 62234 - (618) 346-5120
MARION - 2309 W. Main St., Suite 116, Marion, IL 62959 - (618) 993-7200

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- 5) Limited Contact Recreation
- 6) Recreational Navigation

We also began proposing appropriate water quality standards for protecting identified uses, and, where existing conditions do not support such uses, identifying a suite of management alternatives to further improve water quality conditions. Management alternatives being considered thus far include: flow augmentation (where necessary), supplemental aeration, end-of-pipe CSO treatment and disinfection.

The standards that will be needed to protect the proposed aquatic life uses are expected to be very similar to those currently in place for Illinois' General Use classification for most parameters. For some impacted portions of the waterways, a Limited Warm-water Aquatic Life Use or a Modified Warm-water Aquatic Life Use designation may reflect the highest attainable use and less restrictive standards may be appropriate for such waters.

The recreational use bacterial standards options for CAWS are:

1. Whole-body Contact Recreation: 30-day geometric mean of 126 cfu *E. coli*, and a daily maximum of 576 cfu *E. coli*. The standard shall apply only during a proposed recreational period of February through November.
2. Limited Contact Recreation: 30-day geometric mean of 1030 cfu *E. coli*. The standard shall apply only during a proposed recreational period of February through November.
3. Recreational Navigation: 30-day geometric mean of 2740 cfu *E. coli*. The standard shall apply only during a proposed recreational period of February through November.

The IEPA UAA team analyzed and presented the recreational, water quality and biological data for the first six CAWS segments. Based upon this information, the UAA team is recommending the following existing or proposed potential designated uses:

| Proposed Designated Use | Upper North Shore Channel | Lower North Shore Channel | Upper North Branch Chicago River | Lower North Branch Chicago River | Chicago River | South Branch Chicago River |
|----------------------------------|---------------------------|---------------------------|----------------------------------|----------------------------------|---------------|----------------------------|
| Whole-Body Contact Recreation | | | | | | |
| Limited Contact Recreation | X | X | X | X | X | X |
| Recreational Navigation | X | X | X | X | X | X |
| General Warm-Water Aquatic Life | | | | | | |
| Modified Warm-Water Aquatic Life | X | X | X | | X | X |
| Limited Warm-Water Aquatic Life | | | | X | | |

Data from MWRD's treatment facilities shows that the District is doing an admirable job in producing a treatment plant effluent that for the most part meets or exceeds the existing General

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Use water quality standards throughout the entire CAWS. There are periods, however, when dissolved oxygen standards are not being met in the waterways, especially during and after wet-weather CSO periods. Oxygen deficiencies also exist in waterway reaches subject to periods of limited or no flow, such as the Upper North Shore Channel. During such overflow events and in flow challenged reaches, selected management strategies will be required to ensure that standards are being met and designated uses are protected.

Where it was identified that existing conditions fall short of potential standards, SAC and the IEPA UAA identified the following management alternatives that need to be evaluated for improving water quality conditions:

| Management Alternatives | Upper North Shore Channel | Lower North Shore Channel | Upper North Branch Chicago River | Lower North Branch Chicago River | Chicago River | South Branch Chicago River |
|------------------------------|---------------------------|---------------------------|----------------------------------|----------------------------------|---------------|----------------------------|
| Flow Augmentation | X | | | | | |
| Aeration | X | | X | X | | X |
| Instream Habitat Enhancement | | | | | | |
| Sediment Removal | | | | | | |
| CSO Treatment | X | X | X | X | X | X |
| Disinfection | X | X | X | X | X | X |
| Other | | | | | | |

With respect to dissolved oxygen, SAC concluded that the following specific alternatives deserve further detailed evaluations:

1. diverting a portion of MWRD's North Side WRP effluent to a point near Sheridan Road to improve channel flow and dissolved oxygen conditions.
2. installing supplemental aeration stations.
3. performing end-of-pipe treatment of CSOs.

IEPA understands that the MWRD water quality model will soon be available for use in analyzing various management options and we are requesting that the model be used to identify where supplemental aeration or flow augmentation will be needed to meet three different potential dissolved oxygen criteria levels: 4 mg/l, 5 mg/l and 6 mg/l.

The SAC reviewed data on the existing recreation uses occurring on the waterways. Based upon these data, it is believed that there is some level of human exposure to the water in all of the segments of the waterways and this recreational use is expected to continue and increase over time. It is also believed from the available data for indicator bacteria that, at present, the risk of illness from exposure to pathogens in the water may be unacceptably high. Since the initial six CAWS segments are impacted by the effluent from the North Side WRP, disinfection may need to occur to protect existing uses therein. To adequately evaluate the options for reducing risk

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and protecting the existing and attainable uses identified through the UAA, I am requesting that MWRD provide IEPA with sound engineering estimates to construct disinfection facilities at the North Side Plant. All feasible alternatives for achieving disinfection should be considered to meet the proposed bacterial standards. Since the UAA has also identified that similar recreational uses exist further downstream and in the Calumet area, I am requesting that MWRD also provide IEPA with sound engineering estimates for implementing disinfection at the Calumet and Stickney WRPs. The disinfection period for CAWS may run from as early as February to as late as November. Please include with your estimates, a discussion of the environmental side effects associated with the alternatives considered, such as energy consumption and chemical byproducts production, as well as an estimate of the costs associated with constructing and operating dehalogenation facilities for disinfection options that involve the use of halogens. The estimates should be broken down on a WRP-by-WRP basis and include detailed descriptions of how the estimates were developed.

SAC and the IEPA UAA team will soon complete their review of the chemical, physical, and biological data associated with the water and sediment in the remaining CAWS segments. At the completion of the data review, management alternatives that could be implemented to improve water quality conditions will be identified, and where appropriate, stakeholders will be requested to perform additional engineering estimates.

MWRD is to be commended for the outstanding contribution they have made in improving the water quality in CAWS. IEPA looks forward to working with MWRD, the City of Chicago and the other stakeholders to achieve the goals and requirements of the Clean Water Act. I would like to arrange a meeting with you and your staff to discuss MWRD's progress on the disinfection engineering analysis requested in January 2003, the additional evaluations requested herein and a timetable for the completion of the evaluations.

Thank you for your significant contributions to the UAA process, and we continue looking forward to working with you and your staff.

Sincerely,



Toby Frevert, Manager
Division of Water Pollution Control
Bureau of Water

EXHIBIT 3

Protecting Our Water Environment

July 11, 2008

BOARD OF COMMISSIONERS
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Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312-751-5600

John C. Farnan, P.E.
General Superintendent

May 21, 2004

312-751-7900 FAX 312-751-5681

Mr. Toby Frevert, Manager
Division of Water Pollution Control
Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P. O. Box 19276
Springfield, IL 62794-9276

Dear Mr. Frevert,

Subject: Evaluation of Management Alternatives for the Chicago Area Waterways

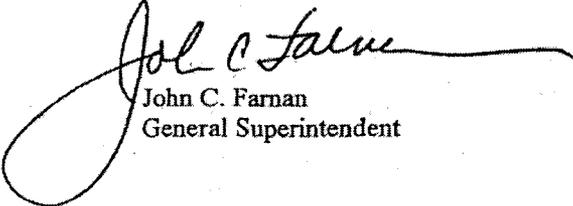
We are in receipt of your letter dated March 12, 2004, subject as above, and we wish to inform you how we intend to respond. As discussed at our meeting on April 26, your letter requests a significant amount of work on our part and this will require expenditures for engineering services and adequate time to give the matters serious study. We believe that you will want answers that are thorough and competent.

The work requested has been divided into two topical areas, disinfection and water quality management. An outline for each is attached, describing the tasks to be performed and the schedule we intend to follow. Anticipated completion dates for future tasks are shown in italics.

We will begin to pursue these studies and report our progress to you at quarterly intervals. The first report will be for the period ending June 30, 2004 and be delivered to you by July 15, 2004. Subsequent reports will be delivered by October 15, 2004 and by January 15, April 15, July 15, and October 15, 2005. We anticipate completion of all work by December 31, 2005 and the final progress report will be delivered by January 15, 2006.

If you have any questions, please contact Mr. Richard Lanyon, Director of Research and Development at 312-751-5190.

Very truly yours,


John C. Farnan
General Superintendent

RL:dl
Attachments

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Metropolitan Water Reclamation District of Greater Chicago

CHICAGO AREA WATERWAYS USE ATTAINABILITY ANALYSIS STUDY

DISINFECTION STRATEGY

In response to the IEPA letter dated March 12, 2004 regarding the Chicago Area Waterways UAA Study, the District will pursue the matter of disinfection following the five tasks identified below. The key issue in this strategy is the assessment of the risk to human health relative to the designated use. If the selected designated use is non-contact recreation such as canoeing, fishing, etc., then the District will investigate whether a significant lessening of health risk is achieved by disinfecting the effluent and whether the cost of disinfection is justified for the benefit derived.

Risk Assessment of Human Health Impacts of Disinfection vs. No Disinfection

R&D will retain the services of a consultant to perform a comparative risk assessment of the human health impacts of continuing with the current practice of no disinfection vs. initiating disinfection at the three large WRPs. The risk assessment will attempt to quantify the expected reduction, if any, in the incidence of disease to the affected population that instituting disinfection would achieve. The magnitude of the reduction in health impacts, if any, will then be compared to the anticipated costs of instituting disinfection.

Preparation of RFP complete: *June 4, 2004*

RFP advertised: *June 30, 2004*

Agreement for services approved by Board: *September 9, 2004*

Agreement for services executed: *September 30, 2004*

Completion of work: *July 30, 2005*

Establish Whether or not Effluent Disinfection is Effective

R&D will perform additional monitoring for fecal coliform in the waterways in an effort to determine whether disinfection of WRP effluents alone, will significantly reduce fecal coliform levels in the waterways, and provide a meaningful increase in human health protection. R&D will also include fecal coliform modeling in the next phase of water quality model development by Marquette University to better analyze the impact of various sources of bacterial material on ambient levels of fecal coliform in the Chicago Area Waterways.

Additional monitoring begun April 2004

Data analysis during *first quarter 2005*

Waterway model analysis *second quarter 2005*

Additional monitoring may continue in *2005*

Evaluate the USEPA Bacterial Guidance

R&D will retain the services of one or more outside experts to examine the science underlying the USEPA November 2003 draft guidance, *Implementation Guidance for Ambient Water Quality Criteria for Bacteria*, and the *1986 Ambient Water Quality Criteria for Bacteria* to determine whether the

"The guidance contains proper scientific foundation for establishing scientifically defensible and justifiable limits for primary, secondary and limited contact recreation."

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Preparation of RFP complete: *June 4, 2004*
RFP advertised: *June 30, 2004*
Agreement for services approved by Board: *September 9, 2004*
Agreement for services executed: *September 30, 2004*
Completion of work: *March 30, 2005*

Investigate Alternative Technologies for Disinfection and the Impacts of Disinfection Chemicals

Engineering will retain the services of an experienced consultant firm to form a committee of experts from academia and engineering to investigate all possible disinfection technologies and recommend a technology appropriate for the District's Calumet, North Side and Stickney WRPs. The investigation will review different disinfection technologies and their range of pathogen destruction ability. The investigation will also include an examination of the environmental and human health impacts of: the energy required to operate the facility; the energy required for the processing and production of process chemicals; and the conversion and degradation of process chemicals.

Request for Interviews sent to six firms: *May 7, 2004*
Request for Proposals sent: *June 30, 2004*
Proposals received: *July 30, 2004*
Agreement for services approved by Board: *October 21, 2004*
Agreement for services executed: *November 12, 2004*
Completion of work: *June 11, 2005*

Estimate the Cost of Disinfection

Engineering will retain the services of one or more engineering consultants to prepare a conceptual level design of the disinfection technology selected above, specific to the Calumet, North Side and Stickney WRPs, and prepare conceptual level cost estimates for the design, construction, operation and maintenance of the disinfection facilities.

Identification of selected technology: *June 11, 2005*
Completion of work: *December 10, 2005*

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Metropolitan Water Reclamation District of Greater Chicago

CHICAGO AREA WATERWAYS USE ATTAINABILITY ANALYSIS STUDY

WATER QUALITY MANAGEMENT ALTERNATIVES STRATEGY

In response to the IEPA letter dated March 12, 2004, regarding the Chicago Area Waterways UAA Study, the District will pursue the matter of water quality management alternatives in the following manner.

Water Quality Modeling

R&D will obtain a proposal from and increase the contract with Marquette University for the additional work necessary to model the water quality conditions to address the dissolved oxygen (DO) deficiencies identified in the letter and determine load reductions needed to meet the three target DO levels specified by the IEPA.

Proposal requested: April 2, 2004.

Proposal dated April 19, 2004, received May 7, 2004.

Submitted to Board of Commissioner for approval: *June 3, 2004*

Notice to proceed: *July 31, 2004*

Simulation development complete: *November 2004*

Evaluation of alternatives complete: *May 2005*

As mentioned in the second to last paragraph of the IEPA letter, these management alternatives are limited to part of the waterway system and these alternatives, and perhaps others, may be considered for additional reaches as the UAA Study progresses. At a later time when further requests are received from IEPA, the District will pursue the matter in the following manner.

Investigate Management Alternatives to Address Water Quality Conditions

Engineering will retain the services of a consulting engineering firm to perform the following tasks:

- Using the modeling results, prepare a conceptual level design for flow augmentation in the Upper North Shore Channel using North Side plant effluent.
- Using the modeling results, prepare a conceptual design for supplemental aeration to meet the target level specified by the IEPA in each of the designated waterways.
- Investigate technologies for end-of-pipe CSO treatment in the designated waterways.

For each of the above, the consultant will prepare conceptual cost estimates for these facilities, including design costs, capital costs, and annual operation and maintenance costs. In addition, for each of the above, the consultant will prepare an examination of the environmental and human health impacts of: the energy required to operate the facility; the energy required for the processing and production of process chemicals; and the conversion and degradation of process chemicals.

Request for Interviews sent to six firms: May 7, 2004

Request for Proposals sent: *June 30, 2004*

Proposals received: *July 30, 2004*

Agreement for services approved by Board: *October 21, 2004*

Agreement for services executed: *November 12, 2004*

Receive modeling results: *May 2005*

Completion of work: *November 2005*

EXHIBIT 4

advisory commission
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Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312-751-5600

Richard Lanyon
General Superintendent

October 18, 2007

312-751-7900 FAX 312-751-5681

Mr. Toby Frevert, Manager
Division of Water Pollution Control
Bureau of Water
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

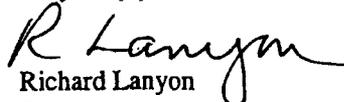
Dear Mr. Frevert:

Subject: Evaluation of Management Alternatives for the Chicago Area Waterways
Third Quarter 2007 Progress Report

As indicated in our letter dated May 21, 2004, we are sending you quarterly progress reports for the subject evaluation. This is the report for the third quarter 2007. Attached are copies of the Disinfection Strategy and the Water Quality Management Alternatives Strategy. On each strategy, we have updated in bold the schedule for completion and included a brief statement of progress in italics following each task.

If you have any questions, please contact Louis Kollias, Director of Research and Development, at (312) 751-5190.

Very truly yours,


Richard Lanyon
General Superintendent

RL:LK:js

Attachments

cc: Ms. Linda Holst, USEPA, Region 5
Mr. R. Sulski, IEPA
Mr. J. Spatz, Chicago DWM
Ms. C. Hudzik, Mayor's Office
Dr. C. Haas
Dr. C. Lue-Hing
Dr. S. Melching
Mr. A. Bouchard
Mr. J. Darin
Mr. C. Davis
Mr. A. Ettinger
Mr. R. French
Ms. M. Frisbie
Ms. C. Petropoulou
Mr. I. Polls

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Metropolitan Water Reclamation District of Greater Chicago

CHICAGO AREA WATERWAYS USE ATTAINABILITY ANALYSIS STUDY

DISINFECTION STRATEGY

Status as of September 30, 2007

In response to the IEPA letters dated March 12 and August 27, 2004, regarding the Chicago Area Waterways UAA Study, the District will pursue the matter of disinfection following the five tasks identified below. The key issue in this strategy is the assessment of the risk to human health relative to the designated use. The IEPA has proposed limited contact recreation in the waterways downstream of the Calumet and North Side WRPs and recreational navigation downstream of the Stickney WRP. The District will determine if a significant lessening of health risk is achieved by disinfecting the effluent and will estimate the costs of effluent disinfection at the three WRPs.

Risk Assessment of Human Health Impacts of Disinfection vs. No Disinfection

R&D will retain the services of a consultant to perform a comparative risk assessment of the human health impacts of continuing with the current practice of no disinfection vs. initiating disinfection at the three large WRPs. The risk assessment will attempt to quantify the expected reduction, if any, in the incidence of disease to the affected population that instituting disinfection would achieve. The magnitude of the reduction in health impacts, if any, will then be compared to the anticipated costs of instituting disinfection.

Preparation of RFP complete: October 15, 2004

RFP advertised: January 5, 2005

Agreement for services approved by Board: June 2005

Agreement for services executed: July 2005

Completion of work: **November 2007**

The Risk Assessment contractor has been selected and work began in June 2005. All dry weather sampling for pathogens was completed by September 9, 2005. Wet weather sampling was not conducted because of the extended dry weather in 2005 and this sampling was completed by November 1, 2006. An interim report on the dry weather risk assessment was sent to you in November 2006, and is on the District website. The wet weather risk assessment will be available in November 2007. In addition, the District initiated an epidemiological study with the University of Illinois Chicago School of Public Health beginning in August 2007.

Establish Whether or not Effluent Disinfection is Effective

R&D will perform additional monitoring for fecal coliform in the waterways in an effort to determine whether disinfection of WRP effluents alone, will significantly reduce fecal coliform levels in the waterways, and provide a meaningful increase in human health protection. R&D will also include fecal coliform modeling in the next phase of water quality model development by Marquette University to better analyze the impact of various sources of bacterial material on ambient levels of fecal coliform in the Chicago Area Waterways.

Additional monitoring begun April 2004

Data analysis during second quarter 2005

Completion of waterway model analysis second quarter 2005

Additional monitoring was completed in 2006

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In the fourth quarter 2006, a total of 84 samples were collected for the additional monitoring, 30 samples were collected for dry weather, and 54 samples were collected as a result of wet weather. An analysis of the data collected in 2004 has been completed and a report was sent on September 19, 2005. The development of fecal coliform modeling has been completed, and a report was sent to you on August 22, 2005. The results of sampling in 2005 and 2006 will be reported to you in the third quarter 2007.

Evaluate the USEPA Bacterial Guidance

R&D will retain the services of one or more outside experts to examine the science underlying the USEPA November 2003 draft guidance, *Implementation Guidance for Ambient Water Quality Criteria for Bacteria*, and the *1986 Ambient Water Quality Criteria for Bacteria* to determine whether

"The guidance contains proper scientific foundation for establishing scientifically defensible and justifiable limits for primary, secondary and limited contact recreation."

Agreement for services approved by Board: February 2005

Agreement for services executed: April 2005

Completion of work: December 2005

The report of the panel of experts has been completed and was submitted to you on August 24, 2006, and is also on the District's website. A letter was sent on November 21, 2006, to Ephraim S. King, Director, Office of Science and Technology for the USEPA, expressing our concerns about the application of the USEPA's national recommended water quality criteria to the Chicago Area Waterways. In a letter dated December 26, 2006 Mr. King applauded our efforts and stated that our concerns would be addressed in an upcoming workshop. However, recently the USEPA has decided not to include secondary and limited contact in their rulemaking.

Investigate Alternative Technologies for Disinfection and the Impacts of Disinfection Chemicals

Engineering will retain the services of an experienced consultant firm to form a committee of experts from academia and engineering to investigate all possible disinfection technologies and recommend a technology appropriate for the District's Calumet, North Side and Stickney WRPs. The investigation will review different disinfection technologies and their range of pathogen destruction ability. The investigation will also include an examination of the environmental and human health impacts of: the energy required to operate the facility; the energy required for the processing and production of process chemicals; and the conversion and degradation of process chemicals.

Request for Interviews sent to six firms: May 7, 2004

Request for Proposals sent: July 15, 2004

Proposals received: August 13, 2004

Agreement for services approved by Board: October 21, 2004

Agreement for services executed: November 22, 2004

Completion of work: June 2005

The report and recommendations resulting from the work of the panel has been completed and was presented to the Stakeholders Advisory Committee (SAC) on June 22, 2005, and is also on the District's website

Estimate the Cost of Disinfection

Engineering will retain the services of one or more engineering consultants to prepare a conceptual level design of the disinfection technology selected above, specific to the Calumet, North Side and Stickney WRPs, and prepare conceptual level cost estimates for the design, construction, operation and maintenance of the disinfection facilities.

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Identification of selected technology: June 2005
Completion of work: August 2005

Work was completed and a report issued to the IEPA on August 31, 2005. The cost estimates were presented to the SAC on October 18, 2005.

Evaluate Disinfection Practices at other WRPs

In addition to the aforementioned tasks, R&D has conducted a survey of WRPs in the Midwest that do not disinfect. The results revealed that the Metropolitan St. Louis Sewer District has two WRPs, LeMay (100 MGD) and Bissell Point (150 MGD) that discharge into the Mississippi River and do not disinfect. The city of Memphis, Tennessee, also has two WRPs, Stiles (135 MGD) and Maxson (80 MGD), that discharge to the Mississippi River and do not disinfect.

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Metropolitan Water Reclamation District of Greater Chicago

CHICAGO AREA WATERWAYS USE ATTAINABILITY ANALYSIS STUDY

WATER QUALITY MANAGEMENT ALTERNATIVES STRATEGY

Status as of September 30, 2007

In response to the IEPA letters dated March 12 and August 27, 2004, regarding the Chicago Area Waterways UAA Study, the District will pursue the matter of water quality management alternatives for all appropriate reaches of the Chicago Waterway System in the following manner.

Water Quality Modeling

R&D will obtain a proposal from and increase the contract with Marquette University for the additional work necessary to model the water quality conditions to address the dissolved oxygen (DO) deficiencies identified in the letter and determine load reductions needed to meet the three target DO levels specified by the IEPA.

Proposal requested: April 2, 2004

Proposal dated April 19, 2004, received May 7, 2004

Submitted to Board of Commissioner for approval: June 3, 2004

Notice to proceed: July 29, 2004

Simulation development complete: April 2005

Evaluation of alternatives complete: December 2006

Four water quality modeling reports have been published and distributed. An additional report comparing alternatives is available on the District's website as Technical Report #18 under the UAA Study.

Investigate Management Alternatives to Address Water Quality Conditions

Engineering will retain the services of a consulting engineering firm to perform the following tasks:

- Using the modeling results, prepare a conceptual level design for flow augmentation in the Upper North Shore Channel using North Side plant effluent.
- Using the modeling results, prepare a conceptual design for supplemental aeration to meet the target level specified by the IEPA in each of the designated waterways.
- Investigate technologies for end-of-pipe CSO treatment in the designated waterways.
- The District will include preliminary engineering and a cost estimate for infrastructure to induce artificial flow in Bubbly Creek for water quality improvement.

For each of the above, the consultant will prepare conceptual cost estimates for these facilities, including design costs, capital costs, and annual operation and maintenance costs. In addition, for each of the above, the consultant will prepare an examination of the environmental and human health impacts of: the energy required to operate the facility; the energy required for the processing and production of process chemicals; and the conversion and degradation of process chemicals.

Request for Interviews sent to six firms: May 7, 2004

Request for Proposals sent: July 15, 2004

Proposals received: August 13, 2004

Agreement for services approved by Board: October 21, 2004

Agreement for services executed: November 22, 2004

Receive modeling results: May 2005

Completion of work: December 2006

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The work is in progress. The results of the analysis for end-of-pipe CSO treatment was reviewed with IEPA in January 2006. Due to the modest water quality benefits and high cost, no further work is contemplated.

In both the above work tasks, collaboration between the District, the engineering consulting firm and the water quality modeling contractor has revealed the complexity of completing work on the several management alternatives in a timely manner. The engineering consulting firm will be preparing separate reports on each management alternative for presentation to the IEPA. After discussion of these work products, there may be further work on integrating the various alternatives to find more cost-effective solutions to achieve the proposed use designations. Discussion with, review by and receipt of comments from the Stakeholder Advisory Committee will provide critical input to the process of reaching an integrated solution and may further delay this schedule. Presentation of the results of this work will be presented in a Stakeholder Advisory Committee meeting scheduled in 2008.

To verify the water quality modeling results from the Marquette University model, the District has begun another modeling study using the three-dimensional Environmental Fluid Dynamics Code developed by the U.S. Environmental Protection Agency. This study is described on the District's website and will be used to better understand the complex hydraulics of the waterway system and the ability to achieve compliance with dissolved oxygen standards.

EXHIBIT 5

PROJECT MEETING NOTES

PROJECT: Chicago Area Waterway System UAA

MEETING DATE: 30 January 2003

MEETING PLACE: Thompson Building, Room 2-025

MEETING TIME: 10:00 – 11:10 am

SUBJECT: Chicago Area Waterways: Waterborne pathogens, wastewater treatment plant upgrades for disinfection and public recreational exposure

Toby Frevert and Rob Sulski from IEPA started off the meeting with a quick introduction about the meeting's goals and then asked Ron French from CDM to give an introduction of the firm and who was present.

The meeting goals are as follows:

- 1) **Public notification of health and safety risks associated with waterway usage.** Lack of disinfection at treatment facilities and CSO constitutes a sources of infectious disease organisms that individual citizens may not be aware of or fully appreciate. I would like to discuss the various roles of government agencies in providing appropriate and credible public advisories on the issues and risks associated with recreational endeavors in the Chicago waterway system. The district is obligated to provide public notice of CSO overflow events under its recently reissued NPDES permits, but I believe there is a broader need to educate the public on health (and safety) risks inherent to the waterway and its various competing functions. This is truly a public health issue and I am looking forward to the expertise and assistance of the public health agencies in this area.
- 2) **Treatment Plant Disinfection**
Although the determination of need for disinfection at MWRD's three main treatment facilities will certainly be a major aspect of the UAA, engineering planning and cost estimates for disinfection will be necessary to complete that assessment. In light of the increased public activity in and along the waterway and therefore increased health exposure to the public, I believe it is appropriate to initiate the engineering work at an early date.
- 3) **Documentation of current recreational activity within the waterway.**
We will be seeking input from MWRD, the City and other attendees on data sources and approaches to assessing both current and projected future recreational activity along various sectors of the waterway as well as competing or incompatible uses, such as navigation and flood control.

Ron French introduced himself and the CDM Team that was present. Ron French will be the Project Manager for CDM, and he will be working closely with his staff in the Chicago office. Colleen Hughes will be responsible for data management. Other members of the project team include Hydroqual, who will be responsible for the modeling effort and Hill and Knowlton, the Public Relations firm for the project. Chris Varones and Brian Kiefer from Hill and Knowlton were present at this meeting. The

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prepared using the PR folks to address the immediate concerns about health threats using the waterways. There was a consensus among those attending that this should be a priority. A handout could be put out by the same Inter-agency group (Illinois Depts. of Public Health, Natural Resources and Agriculture and IEPA) that created the fish consumption advisory and it could be distributed to local marinas, boat launch operators, outdoor sporting goods stores and ski and boat shops.

Treatment Plant Disinfection

Toby asked the MWRD to start working parallel to the UAA, on the engineering/economic considerations of putting in chlorination/dechlorination facilities in at the three big treatment plants to look at the technologies that are available for their facilities and the cost and schedule to implement these technologies. The MWRD said they could only perform preliminary engineering and cost estimates on this matter. USEPA agreed that actual design and construction was not being looked for at this time, that preliminary planning and engineering was appropriate concurrent with the UAA development.

Documentation of Current Recreational Activity within the Waterway

There is a need to know what type of data collection has already been done on the river, particularly water quality and recreational use. Suggestions were made with regard to obtaining data from the Coast Guard, ACOE, USGS, IEPA, IDNR the carrier association and MWRD debris boat crews. Also it was brought to everyone's attention the need to document conflicting and competing uses in the waterways. Were do we get barge traffic data, etc?

Friends of the Chicago River will be contacted for all of their documentation on water quality and recreational usage info.

Action Items

It was recommended that a slide show presentation be put together outlining the UAA program. Ron French will work on this with Hill and Knowlton.

IEPA will prepare a draft public advisory pamphlet and send it Illinois Public Health Dept for their review and final preparation.

Ron French and the CDM Team will meet with key regional representatives to discuss recreational activities within the waterways. Various folks at the meeting identified themselves as being contacts for this type of information. Ron French asked them to leave behind their business card, so that he could follow up with the project.

Toby adjourned the meeting at 11:10.

EXHIBIT 6

Memorandum

To: *Toby Frevert, Illinois EPA*
Rob Sulski, Illinois EPA

From: *Ron French, CDM*

Date: *April 30, 2004*

Subject: *Minutes for the April 27, 2004 Stakeholder Advisory Committee Meeting*

Attendees:

| | | | |
|------------------|-----------------------|------------------|------------------------|
| Rob Sulski | Illinois EPA | Dick Lanyon | MWRDGC |
| Toby Frevert | Illinois EPA | Albert Ettinger | ELPC/Sierra Club |
| Scott Twait | Illinois EPA | Nick Menninga | Greeley & Hansen |
| Colleen Hughes | CDM | Ed Hammer | USEPA |
| Ron French | CDM | Susan O'Connell | MWRDGC |
| Stephanie Brock | CDM | Linda Holst | USEPA |
| Lisa Frede | CICI | Steve Pescitelli | IDNR |
| Beth Wentzel | Prairie River Network | Howard Essig | IEPA |
| Janet Pellegrini | USEPA | Jeff Covinsky | IRCA/HMC |
| Fred Axley | FOCR | George Braam | Kudrna/IIPD |
| Nelson Chueng | Chicago - Planning | Sergio Serafino | MWRDGC |
| Todd Wildermuth | FOCR | Eleanor Roemen | FOTP |
| Julia Wozniak | Midwest Gen. | Joe Deal | City of Chicago |
| Brenda Carter | IERG | Aaron Rosinski | SEIF |
| Mardi Klevs | USEPA | Cathy Mudzik | Chicago Mayor's Office |

On Tuesday, April 27, 2004 the Illinois EPA and CDM held a Stakeholder Advisory Committee (SAC) meeting to discuss the progress of the Chicago Area Waterway System Use Attainability Analysis (CAWS UAA). The meeting covered the following items:

- Update on the QHEI habitat survey and IBI Analysis
- Proposed Use Classifications and Standards

Chicago Area Waterway System UAA April 27, 2004 SAC Meeting
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Update from MWRD

MWRD received the letter from Illinois EPA on March 12, 2004 outlining the various management options which need to be considered on the CAWS. The management options were outlined for the reaches from the North Shore Channel down to the South Branch of the Chicago River. Illinois EPA is currently drafting a letter regarding the remaining reaches. MWRD will submit a response letter with a schedule of deliverables to Illinois EPA by the end of May.

MWRD plans to perform the following task related to the evaluation of disinfection at the plants:

- Conduct Risk Assessment (for this task they will need all of the use data collected on the CAWS)
- Collect additional fecal coliform data
- Include fecal coliform in the water quality model (Marquette University)
- Evaluation of EPA bacteria guidance
- Investigate alternative technologies for disinfection – determine the residual effects of chemical disinfection and the energy costs

MWRD will develop RFPs for the following tasks:

- Risk assessment,
- EPA guidance evaluation
- Investigation of alternative technologies

MWRD expects these deliverables to be completed in mid-2005.

MWRD will perform the following tasks related to evaluation of aeration and flow augmentation alternatives:

- Construct additional model elements (Marquette University)
- Investigate the impacts between alternative technologies for DO and chemical treatments

MWRD expects these deliverables to be completed by summer 2005.

EXHIBIT 7

Memorandum

*To: Toby Frevert, Illinois EPA
Rob Sulski, Illinois EPA*

From: Ron French, CDM

Date: February 18, 2004

Subject: Minutes for the January 27, 2004 Stakeholder Advisory Committee Meeting

Attendees:

| | | | |
|-----------------|--------------------|-------------------|-------------------------|
| Rob Sulski | Illinois EPA | Rebecca Rader | Hill & Knowlton |
| Howard Essig | Illinois EPA | Jeff Covinsky | HMC/IRCA |
| Toby Frevert | Illinois EPA | Roger Dausman | Ill. Port District |
| Colleen Hughes | CDM | Laurel O'Sullivan | LMF |
| Ron French | CDM | Julia Wozniak | Midwest Gen. |
| Stephanie Brock | CDM | Bill Constantelos | Midwest Gen. |
| Todd King | CDM | Susan O'Connell | MWRDGC |
| Nelson Chueng | Chicago - Planning | Dick Lanyon | MWRDGC |
| Lisa Frede | CICI | Beth Wentzel | Prairie River Network |
| Joe Deal | City of Chicago | Michelle Gurgas | Sierra Club |
| Paul Zwijack | Corn Products | Tzachying Su | USACE |
| Bob Foster | CPD | Janet Pellegrini | USEPA |
| Greg Seegert | EA Engineering | Ed Hammer | USEPA |
| Todd Wildermuth | FOCR | Dave Pfeifer | USEPA |
| Fred Axley | FOCR | Peter Howe | USEPA |
| Nick Menninga | Greeley & Hansen | Allen Burton | Wright State University |

On Tuesday, January 27, 2004 the Illinois EPA and CDM held a meeting of the Stakeholder Advisory Committee (SAC) to discuss the progress of the Chicago Area Waterway System Use Attainability Analysis (CAWS UAA). The meeting reviewed data presented during the December SAC meeting on three CAWS reaches at the northern end of the project area, presented data on three additional reaches, and covered the following items:

- Overview of the Rain Blocker Program
- Review and Discussion of Proposed Use Classifications and Standards
- Upper North Shore Channel, Lower North Shore Channel, and Upper North Branch of the Chicago River Data Summary and Discussion of Attainable Uses and Management Options

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February 18, 2004

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Toby Frevert, Illinois EPA, reinforced the objectives of the UAA, which is to obtain the highest potential use possible in the next 5 to 10 years. He would like SAC members to disclose all legitimate and plausible plans and management options in order to assist in the proper designation of aquatic and recreational uses for these three segments of the CAWS.

- The Sierra Club indicated, without providing details, that there is the potential for major physical changes to CAWS within the next 5-10 years.
- The Park District is working with USACE on 3 projects in the area. One project is currently under construction on the NSC, the other two are still in design phase.
- Dick Lanyon of MWRD described two projects that are evaluating aeration on the North Shore Channel. One project is being conducted by Northwestern Engineering students and is evaluating an aeration plan for using solar powered bottom aerators. The Northwestern project is very preliminary and no results have been formulated. The other project is being performed at the Evanston Ecology Center to evaluate if it is possible to use the excess energy generated from a new wind generator for instream aeration. Again, there are no results from this evaluation at this time.

Toby Frevert urged SAC members and project staff to focus management efforts on methods which center on dissolved oxygen (DO) because these are likely more feasible and cost effective than redesigning the physical structure of the CAWS. Additionally, he clarified that MWRD cannot be expected to evaluate dozens of different management options to determine the impacts on water quality; we need to concentrate on realistic options. Their analysis will also include cost determinations. Finally, he would like the project teams report to document that prohibiting the use of the waterways is not politically feasible or in the best interest of CAWS. Therefore, sealing off the waterways is not an acceptable alternative.

The discussion of management options was quite extensive. The following suggestions were made during the discussion:

- Divert MWRD flow from the North Side WRP to the Wilmette Lock for flow augmentation. This would alleviate the stagnant conditions and would likely improve velocity, turbulence and DO conditions in the Upper North Shore Channel.
- Construct a series of SEPA stations
- Disinfect at the North Side WRP
- Install stormwater BMPs (such as those outlined in NPDES Phase II Permits). Municipalities would implement the BMPs. There may not be an accurate method to determine the impact BMPs would have on bacteria levels.

EXHIBIT 8

Memorandum

To: *Toby Frevert, Illinois EPA
Rob Sulski, Illinois EPA*

From: *Ron French, CDM*

Date: *July 28, 2003*

Subject: *Meeting Minutes for the July Stakeholder Advisory Committee*

Attendees:

| Name | Organization | Name | Organization |
|------------------|------------------------|-------------------------|---------------------|
| Rob Sulski | Illinois EPA | Lisa Frede | CICI |
| Scott Twait | Illinois EPA | Laurene von Klan | FCR |
| Ron French | CDM | Julia Wozniak | Midwest Generation |
| Chris Yamaya | CDM | Bill Constantelos | Midwest Generation |
| John D'Aniello | CDM | Jessica Harker | Primera |
| Nicole Rowan | CDM | Sarah Tupper | Sierra Club |
| Susan O'Connell | MWRD | Albert Ettinger | ELPC/ Sierra Club |
| Lou Kollias | MWRD | Paul ZwiJack | Corn Products |
| Sergio Seregino | MWRD | Laurel O'Sullivan | LMF |
| Rebecca Rader | Hill & Knowlton | Jayne Lillienfeld-Jones | LMF Contractor |
| Joe Deal | Chicago Mayor's Office | Nick Menninga | Greeley & Hansen |
| Bob Foster | Chicago Park District | Brenda Carter | IERG |
| Janet Pellegrini | USEPA | | |

On Tuesday, July 22, 2003 the Illinois EPA and CDM held a Stakeholder Advisory Committee (SAC) meeting to discuss the Chicago Area Waterway System Use Attainability Analysis (CAWS UAA). The meeting covered the following items:

- Friends of the Chicago River - Overview
- Lake Michigan Federation - Overview
- Physical Features of the CAWS
- Overview of Other Urban Streams

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- Naturally occurring pollutant concentrations
- Natural ephemeral intermittent or low flow conditions or water levels
- Human caused conditions or sources of pollution
- Dams, diversions or other types of hydrologic modifications
- Physical conditions related to the natural features of the water body
- Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact

Cost

SAC members were interested in the cost impacts of MWRD disinfection. The economic and social cost impact for disinfection is currently not known. However, Illinois EPA has sent a letter to the MWRD requesting a cost estimate for disinfection.

A SAC member suggested that an outside organization estimate MWRD disinfection costs. The members were reminded that once MWRD submits their estimate, IEPA and CDM will have the information needed to perform a separate cost analysis.

One SAC member stated economic discussions are premature. Physical factor limitations need to be evaluated first. The project team will present the economics of the attainable alternatives when they have been determined.

SAC members also questioned the technique of estimating the costs of selected remedies. The typical cost estimate for a UAA does not incorporate property value along the waterway or savings on health expenses. The cost assessment is gauged as a percent burden for the median income.

Water Quality Standards as They Apply to the Chicago Area Waterway System

Nicole Rowan of CDM presented a map of 2002 303(d) listed segments in the CAWS. A description of impairments for each segment and the cause of the impairments were described for each segment. Water quality violations within the CAWS included thirty-four parameters. The water quality standards for both General and Secondary Use were summarized for each listed parameter.

Goals for Next Meeting

The next SAC meeting will be held on August 26, 2003 at 9:00 am in the Thompson Center. The goal for the next meeting includes: