ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS FOR THE CHICAGO AREA WATERWAY SYSTEM AND THE LOWER DES PLAINES RIVER: PROPOSED AMENDMENTS TO 35 Ill. Adm. Code Parts 301, 302, 303 and 304	)	R08-09 (Rulemaking-Water)

REPORT OF PROCEEDINGS held in the above-entitled cause before Hearing Officer Marie Tipsord, called by the Illinois Pollution Control Board, taken before Laura Mukahirn, CSR, a notary public within and for the County of Cook and State of Illinois, 9511 Harrison Street, Des Plaines, Illinois, on the 24th day of April, 2008, commencing at the hour of 9:00 a.m.

A P P E A R A N C E S

MS. MARIE TIPSORD, Hearing Officer
MR. TANNER GIRARD, Acting Chairman
MR. ANAND RAO
MS. ALISA LIU
MR. THOMAS E. JOHNSON
Appearing on behalf of the Illinois Pollution Control Board

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217)782-5544
BY: MS. DEBORAH WILLIAMS
MS. STEPHANIE DIERS
MR. ROBERT SULSKI
MR. SCOTT TWAIT
MR. ROY SMOGOR

HEARING OFFICER TIPSORD: Good morning. My name is Marie Tipsord and I've been appointed by the board to serve as hearing officer in this proceedings entitled Water Quality Standards and Effluent Limitations for the Chicago Area Waterway System and Lower Des Plaines River. Proposed amendments to 35 Illinois Admin. Code 301, 302, 303 and 304. The docket No. Is R08-9. To my immediate right is Dr. Tanner Girard, presiding board member in this proceeding and to his right is board member Thomas Johnson. To my immediate left will be Anand Rao and to his left will be Alisa Liu from the technical staff.

This is Day Two of our third set of hearings which I think now makes 11 days of hearing, ten days? I've lost track. The purpose is to continue with questions for the Environmental Protection Agency. The Agency witnesses were introduced and sworn in yesterday. I'll have you introduce them again just for purposes of the record, and I ask that everyone again identify yourselves

today for the first time in case someone picks up this transcript blind. We still have questions from the Metropolitan Water Reclamation District of Greater Chicago and ExxonMobil Oil Corporation. Anyone may ask a follow-up question and not need wait until your turn to ask questions. After we finished the pre-filed questions, I will allow for additional time for anyone who might have questions based on material that's been presented since the beginning of these hearings. After I've acknowledged you, as I've said, please state your name and who you represent, speak one at a time. If you're speaking over each other, the court reporter will not be able to get your questions on the record. Note that any questions by a board member or staff are intended to help build a complete record for the Board's decision and not to express any preconceived notion or bias. Today we will not go until 7:00 o'clock. Hopefully we will be done before 5:00, but at least until 5:00. And with that, I see that Mr. Andes looks like he's

ready to go.

MR. ANDES: Fred Andes, Metropolitan Water Reclamation District, Greater Chicago.

HEARING OFFICER TIPSORD: I think I was going to have you introduce the witnesses again for the record.

MR. TWAIT: I'm Scott Twait for the Illinois EPA.

MS. WILLIAMS: Debra Williams, assistant counsel Illinois EPA.

MS. DIERS: Stephanie Diers, counsel for Illinois EPA.

MR. SULSKI: Rob Sulski, Illinois EPA.

MR. ESSIG: Albert Essig, Illinois EPA.

MR. SMOGOR: Roy Smogor, Illinois EPA.

HEARING OFFICER TIPSORD: And, again, you were all sworn in yesterday, so.

MS. WILLIAMS: Except for Miss Diers.

MR. ANDES: We're going to continue with questions on IBI issues, and this is a follow-up question. On Page 12 of Attachment U, which is entitled Interpreting Illinois Fish Ibi Scores, it states, quote,

we think that explicit definition and description of the biological, chemical, and physical conditions expected to occur at various levels of biotic integrity can help clarify, standardize, and improve the reliability of some of the subjectivity necessary involved using IBI scores to help assure attainment of aquatic life use.

MS. DIERS: Excuse me, Fred. Is this a prefiled question?

MR. ANDES: I'm sorry. It was a follow-up.

MS. WILLIAMS: We're looking on Page 12 of U?

MR. ANDES: Yes.

MR. SULSKI: Where does it start, please.

MR. ANDES: We think that explicit definition and description. So my question as to that is does the CAWS UAA provide explicit definition and description of the biological, chemical, and physical conditions expected to occur at various levels of biotic integrity and, if so, can you point us to

where in Attachment B it does that.

MR. SMOGOR: I don't know if the UAA addresses this sentence in particular. This sentence was not meant to address UAAs in particular. This is my writing, this is something that I created, this report, with the help of others. And, in general, if I -- What I was talking about here is just in general terms applying fish IBIs. It always helps to have that type of information, but that doesn't mean you can't make decisions and interpretations based on less than the ideal set of information. We're often not afforded the ideal set of information. So I think that's why I used the word can help assess attainment. It was a bit of a qualifier there realizing that we never have perfect and complete information to make the decisions and to make the interpretations that were called upon to do. And that's all I meant there, is just speaking in general.

MR. ANDES: So the UAA report does not provide that explicit definition and description? Am I right?

MR. SMOGOR: I would say we believe that UAA and the additional information that's on the record provides sufficient information to allow us to come to the conclusions and interpretations that we've presented in this rulemaking.

MR. ANDES: That wasn't my question. The question was does it provide the explicit definition and description of the conditions expected to occur at various levels of biotic integrity?

MR. SMOGOR: Does it provide explicit definition and description? I don't know. It depends on how someone would interpret that word explicit.

MR. ANDES: Well, if you think it might be there, then tell me where it is.

MR. SMOGOR: I think it -- What we've been talking about through all these proceedings is that the information is sufficient in some person's judgment that may not meet the definition of explicit. I think some of the information is explicit. It's very detailed. It talks about -- the

information is detailed enough to come to reasonable interpretation.

MR. ANDES: But I recall that in response to several questions in earlier hearings when we asked can you define a specific set of biological conditions, fish species, et cetera, that would occur at various levels of biotic integrity, that the answer we got was basically, well, no, we haven't defined that. It's more that the IBI score would go from X to Y. But we haven't defined exactly what it means in terms of would that mean more of a particular species or better diversity or whatever. It was simply that overall the scores would go up. And I believe that was the Agency's testimony in past hearings.

MR. SMOGOR: I'm not sure exactly what you're talking about there, so I can't comment on that interpretation.

MR. ANDES: Okay. What we're trying to understand is if the document you wrote says that explicit -- this explicit definition and description would help address

the subjectivity involved with using IBI scores to help assess attainment, but we can't pinpoint any particular place in the UAA report where it actually provides explicit definition doesn't mean, well, if you look at all the documents, it's in there somewhere. Explicit means clear, set forth in one place where we can look at it, and it sounds like that's just not there.

MR. SMOGOR: Well, I think there's clear enough, sufficient enough explicit enough information in what's on the record to support the interpretations and the conclusions that we've put on the record. And I don't know what else to say beyond that. We believe there is enough information, we do believe it's explicit enough to justify the conclusions we made. And I do understand and appreciate that there may be opposing perspectives or different perspectives on that.

MR. ANDES: Okay. Let me move on to another follow-up question. At the March 10 hearing on Pages 16, 20, 22, and 30, the

morning transcript, Mr. Sulski stated that a weight of evidence approach was used for considering factors such as habitat, IBI scores, aquatic life uses, macroinvertebrate data and sediment quality in the CAWS.

MS. WILLIAMS: Did you provide a page, Fred?

MR. ANDES: Pages 16, 20, 22, and 30 of the morning transcript on March 10.

MS. WILLIAMS: So you're not quoting? You're paraphrasing?

MR. ANDES: I'm summarizing those statements. The weight of evidence issue was addressed in several questions. And the first thing I'd like to try to understand is what exactly does that mean when you say that the IEPA used a weight of evidence approach?

MS. WILLIAMS: I'm asking him to review those pages.

MR. SULSKI: Please repeat your question.

MR. ANDES: Sure. In the hearing in those places you stated that a weight of evidence approach was used for considering a

number of factors on attainment of aquatic life uses. Can you explain exactly what a weight of evidence approach is? What approach you used and how you assess the various factors.

MR. SULSKI: Okay. We begin with a set of habitat data and lump on to that our knowledge of the system in terms of physics and experience or other systems in the case of a contractor. We include any IBI data we have, we include any chemical data we have, we include the sediment chemistry data, all the data that we have, and make a determination on whatever we think the potential is for that system not looking at any one of those in particular. But, as we've said before, it's weighted towards the habitat conditions. Because we identified, through the chemical review of the chemistry, that there are chemical stressors in the system. And then even with the habitat data, the QHEI, we look at certain metrics involved in that habitat assessment, and in our experience in traveling the waterways, we

look at where those habitat measurements were made, are they representative of the entire system, or is this just a little pocket that's unusual and sort of unique, or does it represent the whole reach that we're looking at. And then as far as the sediment, do we have enough information to evaluate whether the sediment is a stressor, do we have enough chemistry to evaluate whether the chemistry is a stressor, what parameters are falling below, what our screening factors were. So all of that combined is a weight of evidence determination.

MR. ANDES: Is there someplace where this approach is laid out in terms of how those factors are considered, what weight is given to each one?

MR. SULSKI: I can't pinpoint right now in the reports. I could look. However, in my experience in reviewing literature and attending conferences, studies, you know, common scientific practice to use a weight of evidence approach when you start evaluating biological systems.

MR. ANDES: Can you, and I'm aware of reports in the scientific literature about the weight of evidence approach. Can you point us to any particular studies or documents in the literature that would have been used in developing this approach?

MR. SULSKI: Well, for example, I have, you know, a stack of manuscripts and papers and publications that talk about sediments, you know. And always when you're looking at a biological system and the effects on biological system, there are so many factors involved in that that you have to use a weight of evidence approach.

MR. ANDES: But I'm trying to figure out which weight of evidence approach you used since there are a lot of different ways to do it. For example, there's the Pellston report on sediment quality and assessing sediment quality of the weight of evidence approach. Was that report considered in assessing the factors here?

MR. SULSKI: I can't pin my knowledge on that particular document, but, you know, I

do know that in looking at biological systems, you have to evaluate all these different entities, or let's call them metrics or parameters, that includes, you know, biological data, chemistry, and that sort of thing. Howard did point out to me that CDM used an approach that's --

MR. ESSIG: If you check out Page 5-7 in the CAWS UAA.

MS. WILLIAMS: Attachment B.

MR. ANDES: Page 5-7.

MR. ESSIG: And it's Figure 5-1. It goes through the assessment procedure that Illinois EPA uses when assessing the water for the Fuel 3D report (inaudible).

MR. ANDES: Okay. But that isn't necessarily approach you used in determining biological potential of these --

MR. ESSIG: Not for biological potential. Biological primarily was based on more of the habitat laws. All the other data we used to assess what's basically the current condition, and that's how we would assess current conditions in Illinois. It's

based on basically this chart.

MR. ANDES: So does that mean that you use a weight of evidence approach in determining the current conditions but not in determining biological potential?

MR. ESSIG: Correct. Because the current condition in terms of water chemistry, let's say, if water chemistry is poor, that's something that might be able to be corrected. If you're openly going to look at the biology occurring in that poor water quality condition, you'd never improve it. You'd just set it at what it is and there would be no change. So the idea is to look at a system and see is there any potential there, does the habitat give you any type of potential that could possibly improve if other factors were improved.

MR. ANDES: So then a weight of evidence approach was not used in determining the new use categories for these water bodies? I thought the testimony was that it was used.

MR. SULSKI: That's not true. But

when you say weight of evidence approach, it's not -- There's no rigid definition. If you go from one place to another, you will find, you know, that you have to rely on the weight of evidence and sometimes they use a balance as an analogy of that. So in terms of one specific method that one particular researcher used, I don't think that that's what was intended by that word weight of evidence. The weight of evidence is the entire package, the entire assessment that we do.

MR. ANDES: But literature, if I'm, if I read it correctly, defines a structured way of considering various factors. It's not that you just take a bunch of things and lump them in together and then come out with a conclusion. It's a structured nonarbitrary way of assessing a number of factors to which I know, for example, the Pellston Report is very clear on. I'm trying to understand how the Agency -- Did the agency do a structured assessment? And, if so, I'm trying to understand the structure, not just that there

were a bunch of things considered, but what were the factors considered and what was the specific weight given to each one?

MR. SMOGOR: I agree there are approaches in the literature that go through a structured fairly well-defined process. But there's also literature that talks about weight of evidence being defined in many different ways, many different levels of detail. I think the weight of evidence being referred to here is in more general terms. We considered another buzz word from the literature is multiple lines of evidence. Multiple lines of evidence were considered, and there is no quantitative weighting of those lines of evidence that's part of this record that I'm aware of. That's part of our statement of reasons. We look at multiple lines of evidence, we made interpretations both on those -- on those multiple lines of evidence for proposing biological potential, for proposing aquatic life uses, and I don't believe that in what's on the record there is a step-by-step well-detailed or detailed

process that defines them.

MR. ANDES: So if I'm looking for a structured scientific assessment here of these various factors, I'm not really going to find that anywhere?

MR. SMOGOR: You're not going to find a step-by-step process for how we arrive at our conclusions. If you want to call that -- if a lack of a step-by-step process is not structured then based on your definition of nonstructured, then you can call that nonstructured.

MR. ANDES: Okay. And the challenge here obviously is we're trying to figure out how do we assess it in determining -- and critique it when there's no structure to it?

MR. SMOGOR: Well, I think there's some structure to it. It's what you got in the statement of reasons. And if you believe that's lacking, I guess that's why we're here to discuss these things. And I guess I can't comment much further on that to say I agree with you, there is no step-by-step detailed structure about how we went, used all of the

lines of evidence and came to our conclusions about the aquatic life uses.

MR. ANDES: And --

MR. SULSKI: Could I add to that? In the UAA process, it's an open process involving stakeholders. And to a great extent within that UAA process, the structure of the analysis was guided by the SAC group so that when we hit a dead end on habitat, all agreed that habitat was an important line that could answer some questions for us, so important that some money came up to do a habitat analysis.

MR. ANDES: Did the final proposal from the Agency match recommendations from that group? Haven't there been substantial -- I'm really leery of saying, well, the group had a consensus. The Agency's proposal is what we're here for, not the recommendations of stakeholders earlier. And the Agency has to stand the fall based on its record in this rulemaking. So, particularly, when this rule has changed substantially since what the stakeholders

discussed, I don't think that's all that relevant.

MR. ETTINGER: I think we're getting into a few speeches here, rather than questions.

MR. ANDES: That's fine. Let me move onto --

MS. WILLIAMS: Can I ask a follow-up question at this point?

HEARING OFFICER TIPSORD: Sure.

MS. WILLIAMS: Mr. Andes is getting at whether we followed a specific methodology from scientific literature. Can any of you answer whether or not a specific methodology for analyzing UA factors is laid out in the Clean Water Act or in the federal regulations anywhere?

MR. SULSKI: UAA says that a UAA is a structured scientific analysis. That's it.

MR. SMOGOR: But if you're asking does the Clean Water Act and associated regulations provide the steps of that analysis, I don't believe it does.

MS. WILLIAMS: Thank you. That's all

I have.

MR. ANDES: Another question going back to the March 10 transcript. On Page 20, Mr. Essig stated -- if you want to go to that transcript, that's fine. I'm quoting from Mr. Essig. The benthic data wasn't utilized as much as it may have been able to be, primarily because of the relationship between the habitat measures, the qualitative habitat evaluation index, and the fish index of biointegrity that were developed in Ohio or more directly related to each other, end quote. Do you folks have the quote?

MR. ESSIG: Yes.

MR. ANDES: First question. Did IEPA intend to relate benthic and vertebrate data in the CAWS to IBI or habitat in the CAWS, or was a decision to focus on fish and habitat made based solely on the Ohio data?

MR. ESSIG: The decisions were based solely on the IBI and QHEI. The macroinvertebrate data was used to look at a current condition.

MR. ANDES: Okay. But my question was

why -- it sounds from the testimony like the reason the benthic data wasn't considered extensively was because of Ohio data. And that's what I'm trying to verify is that that decision to focus away from the benthic was made based on the Ohio data, not on any attempt to look at benthic data in the CAWS and relate that to IBI or habitat.

MR. ESSIG: No, that's not what I meant by saying that. Basically what I meant was the CAWS, the index that was used to assess the macroinvertebrates in the CAWS was the Illinois EPA macroinvertebrate biotic index.

HEARING OFFICER TIPSORD: Mr. Essig, could you face the court reporter.

MR. ESSIG: I'm sorry. That index is a tolerance-based index primarily based on dissolved oxygen and the OD ammonia basically. It gives you a relative idea of the water quality of the system, but it doesn't really take into account all of the factors that may impact the community such as habitat. And I believe the feeling -- and

even in Ohio they primarily use the IBI even though they do use macroinvertebrate data, they collect it and they do have an index for it, but their methodology reflecting macroinvertebrates as well as the methodology that was used in the CAWS is with artificial substrates which are not -- do not reflect the natural conditions of a stream. They're designed primarily to take the differences of habitat and try to minimize that so that you can get an idea of what the actual water quality is like in the absence of differences of habitat. That's primarily why that's used. So because this was a limited, if you will, limited index to one part of the puzzle, it was not included in the biotic potential analysis.

MR. ANDES: That seems to conflict with the testimony from March which you indicated that the benthic data wasn't utilized as much as it may have been able to be primarily because you defined the relationship between the QHEI and the IBI in the Ohio data. That's what it said. So

that's a very different reason than what you're explaining now. I'm trying to understand why the benthic data wasn't given much weight here, and it sounds like the initial explanation was it wasn't given much weight because in Ohio it didn't seem to be a big factor. And I'm trying to figure out, well, have you looked at whether it ought to have been a big factor here rather than in Ohio?

MR. ESSIG: Based on the collection methods and the index used, I would say no, it really probably couldn't be used more the way it was interpreted in this report. And most of from what I'm familiar with from the literature from Ohio, most of their analysis regarding habitat and the BIODUg is primarily done with comparisons of fish and with the habitat and relationships of those two.

MR. ANDES: So my question then is as to the CAWS, why did the Agency decide not to give much weight to benthic data from the CAWS?

MR. ESSIG: I think I just answered

that. I think I've answered it a couple of times now. I've explained the sampling methodology, the limitations of the index, the fact that that index does not encompass other environmental factors. I think that was -- I think that's why the decision was made to limit it primarily to the biotic potential analysis, to primarily the IBI and QHEI.

HEARING OFFICER TIPSORD: Let's go off the record for a second.

(Off the record.)

MR. ANDES: If the issues of concern were the sampling methodology and the nature of the index, did the Agency investigate whether there might have been a way to address the sampling issues, develop the different index, somehow consider the benthic data? Because after all, it would seem that benthic data ought to be relevant, particularly when we have a sediment issue in the water body, benthic issue data ought to be relevant in some way, right? So my question was did the Agency consider other

ways to consider benthic information in the process that would have allowed it to have more weight?

MR. ESSIG: As I said, I think the macroinvertebrate data, the way it is that's presented in the report and even what's available that -- other information that might have been available to utilize with this data I think would have been more used to analyze the current condition of the waterway, not necessarily to determine what the potential is.

MR. ANDES: But wouldn't that be the same case as the fish data? And you did consider fish IBI scores.

MR. ESSIG: To some extent, but it is primarily -- the main focus was the QHEI. IBI was looked at in comparison with the QHEI. The Ed Rankin report, some of their figures showed the relationships between the IBI and the QHEI and the habitat metrics in the QHEI. I'm not aware of relationships like that that have been done for macroinvertebrate data.

MR. ANDES: We're going to move on, unless anybody has any follow-ups, to some questions about dissolved oxygen. And I'm going to start with some of the prefiled questions for Mr. Smogor. And I believe those are on -- start on Page 26 of our prefiled questions with Question No. 7. On Page 4 of your prefiled testimony, you stated dissolved oxygen standards being proposed for the CAWS and the lower Des Plaines River are consistent with the standards already recommended to the Board by Illinois EPA in a pending rulemaking R04-25. The first question is have you taken into account, and I think the Agency's testimony supports this, that the CAWS are unique among the waterways in the state and are not designated as general use waters as is the case in that rulemaking?

MR. SMOGOR: Yes. We accounted for the fact that we're proposing an aquatic life use different from general use biological conditions.

MR. ANDES: But proposing the same

standards?

MR. SMOGOR: Yes.

MR. ANDES: Okay. Would you agree that CAWS --

MR. SMOGOR: Let me back up. We're proposing -- We're not proposing the same dissolved oxygen standards for general use as we have proposed for either of the CAWS waters. Actually, we're not proposing the same -- We're not proposing standards that are the same as general use standards for the CAWS waterways.

MR. ANDES: So the statement that DO standards being proposed are consistent with the standards recommended in that rulemaking --

MR. SMOGOR: By consistent I didn't mean identical. I meant they're consistent with the concepts and the principles on which the general use standards are based, and they're also consistent, logically consistent with what we've set for general use waters. So that doesn't mean they're identical or equivalent.

MR. ANDES: Okay. The CAWS is not capable of supporting a general use biological community, right?

MR. SMOGOR: Correct.

MR. ANDES: Okay. So please explain how these standards are consistent with the methodology and the general use rulemaking but aren't the same?

MR. SMOGOR: Well, again, I think I use the term consistent there in greater context to represent that the standards proposed for CAWS are based on the same principles and concepts and thinking that went into developing the standards for the general use waters.

MR. ANDES: Even though they're significantly different types of water bodies?

MR. SMOGOR: Yes. Because what we're trying to do when we develop DO standards is protect aquatic life such that that aquatic life can achieve the potential that you've proposed as the use. So the bottom line is we're protecting aquatic life to a certain

level, and that's a common thread whether you're setting DO standards for one set of waters or another set of waters.

MR. ANDES: In proposing the DO standards or the CAWS and lower Des Plaines, you account for behavior of the system on wet weather conditions?

MR. SMOGOR: No, not exclusively.

MR. ANDES: Did you consider and propose in the standard that it may lead to propagation and proliferation of less tolerant species that are currently found in the CAWS?

MR. ETTINGER: What? What might lead to propagation of less tolerant species?

MR. ANDES: The proposed standards.

HEARING OFFICER TIPSORD: It's prefiled Question 7E.

MS. WILLIAMS: Do you mean fewer or do you mean -- Can you clarify, Mr. Andes, whether you mean fewer tolerant species or species that are less tolerant? Do you understand my question?

MR. ANDES: Species that are less

tolerant.

MR. SMOGOR: So we're -- yes. I think that's partly the goal.

MR. ANDES: Let me go on to the next question then. Would you agree that there is a risk that occasional CSOs, flow stagnation, higher temperature regimes, and oxygen demand from resuspended sediments can combine to very quickly and unpredictably impact these less tolerant fish populations and negate the benefits of the initial aeration that will be required to achieve the standards? And, if not, why not?

MR. SMOGOR: No. I don't see how benefits of requiring better DO for aquatic life in these waters can somehow have a negative impact on accessible life in these waters. I just don't see the connection there. We're trying to create conditions that are better for aquatic life and we've hoped that we make it better for less tolerant organisms that were precluded to come in and increase the biological condition of the system.

MR. ANDES: The question is whether what you're doing is enabling less tolerant fish populations that are then affected by all the other conditions in this water -- in this set of water bodies and basically knocked out. So you're creating a population of less tolerant fish species, but there are a bunch of other conditions that will impact those species and decimate them.

MR. SMOGOR: Well, when we're developing standards for a particular constituent like dissolved oxygen, I believe our charge is to say define the dissolved oxygen levels that are going to allow you to meet your potential. In other words, if the water is not currently meeting that potential, create better DO conditions if DO is a part of equation. Now, if in creating those standards there are other conditions that may affect how aquatic life relates to DO, I don't see how that creates a justification for not setting DO at the appropriate levels.

MR. ANDES: And might that not,

though, counsel for a weight of evidence approach when one looks at all the different issues in the water body together and tries to figure out how we can create a better situation all told not pollutant by pollutant? It sounds like the DO issue is going to assess specific to DO, but what we're asking is has that -- has the Agency considered that improving that standard when there are other factors in the water body, including physical factors, that will impact that population isn't necessarily -- can be counter-productive?

MR. SMOGOR: I guess I don't see how setting the dissolved oxygen conditions that we proposed can be counter-productive. I just don't see the logic there.

MR. SULSKI: What's more, these occasional CSO flow stagnations, higher temperature regimes were addressed or there are proposals for addressing them.

MR. ANDES: In the CSOs?

MR. SULSKI: CSO, the District has proposed and everybody knows that TARP

continues to be constructed.

MR. ANDES: Will there be CSOs after TARP?

MR. SULSKI: Yes.

HEARING OFFICER TIPSORD: For the record, we've used TARP several times in the last couple of days. Let's go ahead and explain what that is.

MR. SULSKI: TARP is the tunnel and reservoir program for capturing and treating combined sewer overflows, discharges.

HEARING OFFICER TIPSORD: Thank you. I should have had you do it yesterday.

MR. ANDES: Let's move on to the next question. The CAWS UAA Attachment B states the water quality improvements like reaeration will not lead to attainment of aquatic life uses. And I believe we're talking about Clean Water Act, aquatic life uses --

MR. SMOGOR: Excuse me, Mr. Andes. Can you tell me what question you're on, please?

HEARING OFFICER TIPSORD: H.

MR. SMOGOR: Thank you. I'm sorry.

MR. ANDES: Because of habitat limitations. The quote was on Page 5-3 of the UAA report. Can you clarify how the proposed criteria will lead to attainment of the proposed aquatic life uses?

MS. WILLIAMS: Is there a citation to where it says this?

MR. ANDES: It's on Page 5-3 of the UAA report.

HEARING OFFICER TIPSORD: Attachment B to the proposal.

MR. SULSKI: I'm looking to see what 5-3 says exactly. Okay. I've read this text in factor 4 you're talking about?

MR. ANDES: Yes.

MR. SULSKI: Now could you please repeat your question.

MR. ANDES: Please clarify how the proposed DO criteria will lead to attainment of the proposed aquatic life uses given that statement.

MR. SULSKI: I think what the contractor is saying here is that there are

some areas, and he mentions the sanitary ship canal, where some improvements -- or improvements may not lead to, as he puts it, higher aquatic life uses. But we proposed a lesser use for the sanitary ship canal.

MR. ANDES: For part of it, right?

MR. SULSKI: For aquatic life.

MR. ANDES: Right.

MR. SULSKI: All of it.

MR. ANDES: Right. But parts A, parts B?

MR. SULSKI: No, it's all B. Sanitary ship canal is the lowest aquatic life potential zone.

MR. ANDES: Okay.

HEARING OFFICER TIPSORD: I'm not sure you answered the question yet. You explained what your consultant said, but the question is, okay, based on what your consultant said, how do you --

MS. WILLIAMS: I think his answer is that Fred is mischaracterizing what the consultant said is how I'm understanding the --

HEARING OFFICER TIPSORD: Then Mr. Sulski, is that what you're saying?

MR. SULSKI: I guess, as we go back and forth, I'm still unsure of the question now. Howard says he may have a better grasp on it.

MR. ESSIG: The statement that is on that page, it's in relation to the entire CAWS. It's including -- I don't think it's --

MR. ANDES: So not only the canal?

MR. ESSIG: I think what they're saying here is that there are habitat limitations, and it specifically mentions the sanitary ship canal which is a Group B water. The Group A waters have a slightly higher potential. He's referring here to what he's talking about habitat limitations is to the Group B waters, I think is primarily what he's talking about.

MR. ANDES: Okay. Well, let me follow up on that. In envisioning the improved aquatic community that would result from the proposed standards, we've talked about some

of the stressors, CSOs, flow stagnation, et cetera. Does the Agency think that these issues all need to be completely eliminated in order for the uses to be achieved?

MR. SULSKI: Yes, for the most part.

MR. ANDES: Okay. Does that mean that the CSOs need to be completely eliminated or comply with water quality standards, which I think would mean complete elimination?

MR. SULSKI: I don't know whether a complete elimination of CSOs would be necessary to achieve the standards. We are -- The goal is to reduce the number of CSOs from down to roughly two or three a year.

MR. ANDES: Where -- is that documented in the UAA report, that goal?

MR. SULSKI: No, not that I know of.

MR. ANDES: Can you tell me where it came from?

MR. SULSKI: Well, that's a national goal to begin with. And my knowledge of the deep tunnel project suggests that CSOs, the goal is to reduce -- is to follow the federal

goal and reduce CSO frequency to two or three or four times a year.

MR. ANDES: Can you cite me where in the federal policy it gives those numbers?

MR. SULSKI: I can look that up for you and give it to you.

MR. ANDES: Thank you. And any citation you can provide as to the goal of TARPing to meet a specific number along those lines, if you can provide me any --

MR. SULSKI: I can go back to the office and --

MS. WILLIAMS: Can I please get a specific so I have it written down, what are you asking.

MR. ANDES: I'm looking for any citations, whether in federal policy or TARP information, that would lead to a specific number of 2, 3, or 4 CSO events a year as being a goal here.

MS. WILLIAMS: Thank you.

MR. HARLEY: Madam Hearing Officer?

HEARING OFFICE TIPSORD: Yes, Mr. Harley.

MR. HARLEY: If you were to remove all pollutant contributions from CSOs, MS4s, and urban runoff, would the CAWS waterways still experience levels of DO that are inconsistent with the biological potential of the waterways?

MR. SULSKI: I believe so.

MR. HARLEY: What's the basis of your answer?

MR. SULSKI: There are some stagnant reaches, two of them which we've mentioned: The south fork, the south branch, and the upper part of the north shore channel which are stagnant.

MR. HARLEY: A follow-up. If you were to remove all pollutant contributions from CSOs, MS4s, and urban runoff, would the CAWS waterways still experience levels of temperature that are inconsistent with the biological potential of the waterways?

MR. TWAIT: I believe, yes.

MR. HARLEY: And what is the basis of your answer?

MR. TWAIT: Heated effluence going

into the stream.

MR. HARLEY: One more follow-up. If you were to remove all pollutant contributions from CSOs, MS4s, and urban runoff, would the CAWS waterways still experience levels of pathogens that are inconsistent with the recreational potential of the waterways?

MR. TWAIT: Yes.

MR. HARLEY: What is the basis of your answer?

MR. TWAIT: Undisinfected wastewater going into the stream.

MR. HARLEY: Thank you.

HEARING OFFICER TIPSORD: Mr. Ettinger?

MR. ETTINGER: Are the waterways we're talking about here the only ones that have CSOs in the State of Illinois?

MR. TWAIT: No.

MR. ETTINGER: There are CSOs going to the Fox River; is that correct?

MR. TWAIT: I believe so.

MR. ETTINGER: Are general use

standards applicable to a number of other waters across the State of Illinois that have some CSO events?

MR. TWAIT: Yes.

MR. HARLEY: Thank you.

MR. ANDES: Does any other water body have 3,000 CSO events per year?

MR. SULSKI: I don't know.

MR. ETTINGER: Is the Mississippi River designated general use?

MR. ESSIG: The Illinois portion, yes.

MR. ETTINGER: Is the Illinois River designated general use?

MR. ESSIG: Yes.

MR. ETTINGER: Thank you.

MR. ANDES: Do CSOs affect attainment of DO standards?

MR. SULSKI: It depends on the frequency, duration, concentration of material in the CSO.

MR. ANDES: Yesterday it was testified that during CSO events the DO dropped to zero in this system, correct?

MR. SULSKI: That's correct.

MR. ANDES: So is it logical to say that in order to meet -- Has the Agency assessed what it would take in terms of eliminating CSOs, MS4s, and nonpoint runoff in order to meet these DO standards?

MS. WILLIAMS: I missed that. Can you repeat that?

MR. ANDES: Has the Agency assessed what it would take in terms of reducing and eliminating CSOs, MS4 discharges, and nonrunoff in order to meet these DO standards?

MR. SULSKI: The assessment that was done in the UAAs was that we looked at wet and dry weather conditions and water quality in general during those conditions.

MR. ANDES: That's not --

MR. SULSKI: And -- did we do -- We did an assessment of the conditions that exist today. And with knowledge of what's to happen in the future, it was our belief that if we removed these stressors we could come closer to attaining the goals and proposed uses.

MR. ANDES: So, in other words, we would need to remove all dischargers during wet weather from the CSOs, MS4s, and nonpoint runoff?

MR. SULSKI: I didn't say that.

MR. ANDES: Then what? What would we need to do in terms of reducing or eliminating all of those discharges to meet these standards?

MR. SULSKI: For now all I can tell you is that we need to knock the CSOs down, we need to have supplemental aeration, and we need to improve flow in some reaches of the waterway.

MR. ANDES: And in terms of knocking the CSOs down, can you give me more detail about what that means? How many of the thousands of discharges that are per year CSOs, what would that need to be reduced to in order to meet these standards?

MR. SULSKI: The presumptive approach in the CSO guidance, CSO policy, is that if you knock it down to three or four generally you have solved the problems associated with

CSO, but it doesn't stop there. It says that you will still have to do water quality assessments afterwards to make sure that that has taken care of the problem. If it hasn't, you have to go further.

MR. ANDES: Okay. And but technically the CSO policy and the presumptive approach, which can be used, isn't really relevant to this rulemaking. The question is, my question was, has the Agency assessed what would be needed in terms of taking away the CSO discharges, the MS4 discharges, and other nonpoint runoff in order to attain these standards on a continuous basis?

MR. SULSKI: We haven't done a full assessment of what will -- what might be expected when TARP was done.

MR. ANDES: So the answer is no?

MR. SULSKI: Correct.

MR. ANDES: Thank you.

HEARING OFFICER TIPSORD: Mr. Harley?

MR. HARLEY: Miss Williams --

MS. WILLIAMS: Are you asking me a question?

MR. HARLEY: In the legal opinion of the Illinois Environmental Protection Agency, does it have to regulate every source of a pollutant in order to regulate any individual source of pollutant?

MS. WILLIAMS: I don't think so. Does that sound like a legal opinion?

MR. HARLEY: In the legal opinion of the Illinois EPA, in order to regulate any individual source category of a pollutant, does the Agency have to regulate every source category of that pollutant?

MS. WILLIAMS: I believe the answer is no.

MR. HARLEY: So it would be possible for the Agency to regulate publically on treatment works, but not to regulate equally CSOs even though they may be discharging the same pollutants from time to time; is that correct?

MS. WILLIAMS: The answer is yes, except the question was saying the Agency regulate. It would be the Board's regulations that I would be --

MR. HARLEY: I accept your correction. Thank you.

MR. ANDES: Let me follow up with that. Does the DO standard regulate only POTWs and not CSOs and not MS4s?

MS. WILLIAMS: He was not asking about water quality standards specific. Water quality standards don't apply --

MR. ANDES: I am.

MS. WILLIAMS: -- to sources specifically. They apply to the industry.

MR. HARLEY: I would like to follow up. Is there a regulatory regime for CSOs?

MS. WILLIAMS: Yes.

MR. HARLEY: Is there a regulatory regime for MS4s?

MS. WILLIAMS: Yes.

MR. HARLEY: Is urban runoff potentially or actually subject to best management practice regulations that originate from Section 319 of the Clean Water Act?

MS. WILLIAMS: I would have to look at the section reference, but repeat the

question.

MR. HARLEY: Are urban runoff sources potentially subject or actually subject to best management practice regulations under the Clean Water Act?

MR. SULSKI: Yes.

MR. ANDES: Really? Can you provide me with citation for binding regulations as to nonpoint sources?

MR. HARLEY: Potential.

MR. ETTINGER: He said urban runoff, urban runoff.

HEARING OFFICER TIPSORD: You know what, and I appreciate wanting to ask legal opinions, but we're not going to ask them what specifically Section 319 says. 319 speaks for itself, and we can look at 319. And this is argument, not necessarily questions getting us forward. Mr. Ettinger, did you have something?

MR. ETTINGER: I have biological questions.

HEARING OFFICER TIPSORD: Then I would appreciate a biological question. Thank you.

MR. ETTINGER: Here is a toughy. Do fish need oxygen to breath?

MR. SMOGOR: Yes.

MR. ETTINGER: Okay. Mr. Andes and you have pointed out that at times after CSO events, the oxygen level reaches zero; is that correct?

MR. SULSKI: Yes.

MR. HARLEY: Do all the fish die in the CAWS every time this happens?

MR. SULSKI: Not every time.

MR. ETTINGER: Not every time. Thank you. So some of the fish somehow find a place where they can breath; is that correct?

MR. SULSKI: Some of the times.

MR. ETTINGER: Some of the times. If we corrected some of the CSOs that make it easier for the fish to find a place to breathe some of the time, would you expect to have more fish?

MR. ESSIG: Yes.

MR. ETTINGER: Thank you.

MS. WILLIAMS: Can I at this point --

HEARING OFFICER TIPSORD: Revisit your

answer?

MS. WILLIAMS: No, no, no, no. I don't have to answer any more questions. That's fine. I would like to -- We were asked last time about fish kills. The word fish dying came up, so maybe I see an opening to enter an exhibit that we were asked to provide.

HEARING OFFICER TIPSORD: Wonderful.

MS. WILLIAMS: I'm handing you a package of documents that begins with a letter on Metropolitan Water Reclamation District of Chicago letterhead dated August 18, 2006. Can you identify these documents for us?

MR. SULSKI: These are fish kill reports, some including investigation reports and additional data regarding dissolved oxygen that the District provided to us and provided to some extent to the contractor as a part of the UAA process. There was a --

MS. WILLIAMS: At this time I'd like to move that these fish kill reports that we were asked for be entered as an exhibit.

HEARING OFFICER TIPSORD: Okay. Let me first check that I have nine separate documents. Is that correct?

MS. WILLIAMS: Correct.

HEARING OFFICER TIPSORD: There's no objection, we'll enter this as Exhibit 47. Seeing none, it's Exhibit 47. And that is the nine documents.

MS. WILLIAMS: And I guess I'd like to ask him one clarifying question about the documents so that we can make sure the record is clear. You were asked for any reports, I think, on fish kills in these waters that were in the Agency's possession. Can you tell us if you know whether or not this is a complete, all the information that may exist on all fish kills in these waters?

MR. SULSKI: This would not be an exhaustive report on all fish kills.

MS. WILLIAMS: Why not?

MR. SULSKI: Because fish kills occur throughout the waterways, and people don't report them.

MS. WILLIAMS: But do they include

everything that's in your knowledge and possession related to fish kills in these waters?

MR. SULSKI: In terms of reports, yes.

MS. WILLIAMS: Sorry for the diversion.

HEARING OFFICER TIPSORD: And I think we're ready then to go back with Mr. Andes.

MR. ANDES: Further follow-up questions on DO. Would the proposed standard have to be met 100 percent of the time for the water body to be in compliance?

MR. ESSIG: No. We generally consider it's in compliance if less than 10 percent of the values are below -- are below the standard.

MR. ANDES: And is that a policy? Is that in the water quality standard?

MR. ESSIG: No, it's not.

MR. ANDES: Okay. And when we're talking about 90 percent or 100 percent, the standard needs to be met in dry and wet weather conditions, correct?

MR. ESSIG: Correct.

MR. ANDES: Okay. As to dry weather, are the existing DO standards currently being met and to what extent?

MR. ESSIG: In which waterway?

MR. ANDES: Let's look at the CAWS.

MR. ESSIG: I'm aware there are some segments that are not meeting the current secondary contact in the division of aquatic life standard, but I am not sure which segments those are.

MR. ANDES: Okay. And same question as to wet weather. Are areas of the CAWS generally meeting the existing DO standards during wet weather events?

MR. ESSIG: I couldn't say.

MR. ANDES: Is that because the Agency hasn't looked at the total data to determine when it's dry and when it's wet?

MR. ESSIG: Yes.

MR. ANDES: Okay. But it would be logical to assume, based on testimony yesterday, that during wet weather events often the existing standards are not being met since the DO level of zero would not be

in compliance.

MR. ESSIG: Yes.

MR. ANDES: Okay. And these new standards would be, certainly as to specific areas of the CAWS, more stringent than the current standards, correct?

MR. ESSIG: Correct, at times.

MR. SMOGOR: I don't -- I don't know if you can make such a direct comparison because the proposed standards are in a different form. They use different statistics that aren't analogous to the existing standard. The existing standard right now I think is just a do not ever go below value X. And the proposed standards include that threshold which is a daily minimum as well as additional statistics that account for what we call chronic conditions, not just the acute DO conditions.

MR. ANDES: The bottom line --

MS. WILLIAMS: He used value X. I think we'd be clearer for the record if he said for the record what the values are of the current standard.

MR. SULSKI: I'm sorry. The current standard, I think, help me out, please, for the Cal-Sag Channel? I believe it's 3 milligrams per liter, and for the remainder of the secondary contact and indigenous aquatic life waters I believe it's four milligrams per liter.

MR. ETTINGER: Can I just clarify? Part of the area referring to as the CAWS is now designated general use. Is that not correct?

MR. SULSKI: That is correct.

MR. ETTINGER: So, in fact, as to those areas, this is weakening the dissolved oxygen standard?

MR. SMOGOR: Yes. It's -- well, again --

MR. ETTINGER: Loosening the --

MR. SMOGOR: Just that single component. If that -- the component that currently says for general use do not go below five milligrams per liter, that analogous statistic in the standards that we are proposing is a lower value.

MR. ANDES: The bottom line, isn't it going to be more difficult to achieve compliance under the proposed standards? There are control measures that you believe will be required in order to meet the new proposed standards.

MR. SMOGOR: I guess I don't know what you mean by more difficult. More difficult from a -- Can you explain more difficult?

MR. ANDES: There are measures that will have to be taken that the Agency has been looking at and will go into further detail about those in order to meet the new proposed standards, correct?

MR. SULSKI: Correct.

MR. ANDES: Okay. Now, in terms of the proposed standards, once they're adopted, they will apply in terms of measuring attainment of these water bodies, correct?

MR. ESSIG: Correct.

MR. ANDES: I believe the Agency has discussed the fact that TARP reservoirs we put on-line over the next 15 to 20 years. Has the Agency considered that fact in

assessing whether standards ought to be adopted with an immediate attainment date?

MR. TWAIT: No. I don't think the Agency took attainment into account.

MR. ANDES: I believe there's a technical memorandum that the District submitted to the IEPA in the stakeholder process regarding capture and treatment of CSOs, although I'm not sure that's in the record here. Do you know if that document has been reviewed and is part of the record?

MS. WILLIAMS: Can you repeat the document?

MR. ANDES: I believe it's technical memorandum 3WQ submitted by the district about capture and treatment of CSOs.

MS. WILLIAMS: I see 1WQ, 4WQ, 5WQ and 6WQ. I don't believe I see 3 as one of the attachments to the proposal.

MR. ANDES: Okay. Does anyone from the Agency recall reviewing that document?

MR. SULSKI: I don't recall.

MR. ANDES: If it's in the Agency's possession, we'd like it to be made part of

the record. If not, we can submit it.

MR. SULSKI: Did you see if it's included in the CAWS UAA report?

MR. ANDES: I don't believe it is.

MR. SULSKI: I was just wondering if the contractor, if it was provided to the contractor.

MS. WILLIAMS: I don't dispute that we have this document. But since it was prepared I'm not sure -- but since it was prepared and created by the District it would seem easier to me for them to submit it.

MR. ANDES: We can do that.

Has the Agency looked at whether it would be possible to meet the DO standards in the CAWS prior to the TARP reservoirs being totally completed?

MR. SMOGOR: The proposed standard? I don't think we've made any analyses to that effect.

MR. ANDES: Or after TARP is completed either?

MR. SULSKI: We haven't made that analysis.

MR. ANDES: Is the Agency aware of various states and EPA -- various state policies and EPA policies concerning possible wet weather standards?

MS. WILLIAMS: For what?

MR. ANDES: Wet weather standards which, and I'll provide an example in Indiana, but I know there's also EPA policy that concern whether during and shortly after wet weather events certain criteria would not apply during which time other perhaps narrative standards would be in effect?

MR. TWAIT: I believe the Indiana criteria that you're talking about is for bacteria. And if so, then, yes, I would be aware of that.

MR. ANDES: Okay.

MS. WILLIAMS: Can I ask a follow-up at this point?

HEARING OFFICER TIPSORD: Sure.

MS. WILLIAMS: Is anyone aware of any U.S. EPA guidance or any other states that have done any other wet weather criteria other than for bacteria?

MR. TWAIT: I'm not aware of any.

MR. ANDES: Is there any reason one could not do a wet weather standard for a pollutant other than bacteria?

MR. ETTINGER: What do you mean any reason? Legal reason, biological reason?

MR. ANDES: A legal reason.

MS. WILLIAMS: It would depend on -- legally I guess it would depend on the impact to the use. And there could be. There could be.

MR. ANDES: Okay. Thank you. We'd be glad to provide the EPA guidance on how wet weather standards can be developed. If we provide that is the Agency willing to consider a wet weather standard as part of this proceeding, in particular right now for DO?

MS. WILLIAMS: Does that have a title or a number, a citation or a title?

MR. ANDES: It does, and I'd be glad to provide it. There are actually several documents I think we can provide.

MS. WILLIAMS: Well, I don't think I

want to answer whether we'd look at something until we know what it is. I mean in theory we'd look at anything, but --

MR. ANDES: Is the Agency willing to consider developing a wet weather standard as part of this proceeding to address impacts of, for example, CSOs?

MR. SULSKI: We don't know. We'd have to look at the document and see what the -- what hoops you have to jump through.

MR. ANDES: Because isn't the other option to require complete compliance with water quality standards by the CSOs? If we don't change the standard and address the wet weather issue then aren't we requiring 100 percent compliance with the standard for CSO discharges?

MR. ETTINGER: Well, not every CSO causes a violation of the water quality standards. Is that what you're saying?

MR. ANDES: Really?

MS. WILLIAMS: Is there a question pending?

HEARING OFFICER TIPSORD: Yes, there

is.

MR. ANDES: Please read it back.

(Record read back.)

MR. TWAIT: I'm not quite sure I understand the question, but I think the response to that would be that the water quality standard would apply.

MR. ANDES: Okay. I'll move on from there.

HEARING OFFICER TIPSORD: Mr. Harley?

MR. HARLEY: Two follow-ups: I would like to call the panel's attention to dry weather periods. You testified that there are currently exceedances of the secondary contact DO standards during dry weather periods in some portions of the CAWS; is that correct?

MR. SULSKI: Correct.

MR. HARLEY: Is it accurate that pollutant loading from CSOs, MS4s, and urban runoff are less during dry weather periods than during wet weather periods?

MR. SULSKI: Yes.

MR. HARLEY: In your opinion, why are

there DO exceedances during dry weather periods?

MR. SULSKI: Exceedances of DO standards?

MR. HARLEY: Yes.

MR. SULSKI: We identified two reaches: The south fork of the south branch and the upper north shore channel that are stagnant, and so they don't have much throughput following storm events or in very hot weather that dissolved oxygen sags in those reaches.

MR. HARLEY: I also wanted to ask one follow-up question to Mr. Ettinger's question about general use waters presently designated. What are the general use waters presently designated?

HEARING OFFICER TIPSORD: In the CAWS?

MR. HARLEY: No. Under the existing regulatory standards.

MS. WILLIAMS: Well --

MR. HARLEY: Within the CAWS region. I'm sorry.

HEARING OFFICER TIPSORD: I was going

to say, I didn't think you wanted to list all of them.

MR. HARLEY: I don't know if there was a CAWS before the present regulatory.

MR. SULSKI: North shore channel above the north side water reclamation plant, the Chicago River, and the Calumet River from the O'Brien loch northward to Lake Michigan.

MR. HARLEY: Thank you.

HEARING OFFICER TIPSORD: Mr. Andes?

MR. ANDES: Let me follow up first as to the south fork and the south branch of the Chicago River. And I believe this is in the record. Well, we're not sure if -- There's a technical memorandum, another one, that we submitted, the District submitted, and I think that was technical memorandum 6WQ.

MS. WILLIAMS: That's in the record. Let me just reference it. Attachment QQ.

MR. ANDES: And that report which concerns supplemental aeration of the south fork of the south branch also known as Bubbly Creek. My first question is has the Agency reviewed that report in terms of the

engineering controls that would be needed to meet the proposed DO standards?

MR. SULSKI: I know that I read it. I don't know through in and throughout.

MR. ANDES: And in terms of the cost detailed in that report, there are three supplemental aeration stations at an estimated capital cost of 60 to 100 million to address this 1.3 mile length segment. Has the Agency assessed whether that cost is economically reasonable?

MR. SULSKI: Just that it's technically feasible.

MR. ANDES: Thank you. Has the Agency measured or is the Agency aware of any other agency measurements of the sediment oxygen demand at Bubbly Creek?

MR. SULSKI: No.

MR. ANDES: As I understand it, according to the Attachment B, it appears no fish or habitat data were considered for Bubbly Creek, at least from the tables. If that's the case, can you explain to me how the creek was classified in terms of an

aquatic use? Does it have any IBI?

MR. SULSKI: Did they say that there was no data?

MR. ANDES: On Page 5-9 in Figure 5-Q, it doesn't seem to have any IBI or QHEI scores for stations on Bubbly Creek. So we're trying to understand what data were considered in classifying the segment.

MR. SULSKI: If there's no data QHEIs or IBIs, it was classified because of its similar appearance and similar looks to the Sanitary Ship Canal.

MR. ANDES: Can you --

MR. SULSKI: So I don't know of any fish data if it's not in this report.

MR. ANDES: Is Bubbly Creek similar to the Ship Canal in terms of depth, for example?

MR. SULSKI: No. It's shallower.

MR. ANDES: Okay. Can you point us to any place in UAA report or any other documents in the record where the conditions of Bubbly Creek had been assessed with regard to classification into a category?

MR. SULSKI: As I'm looking from what I can recollect, before I look, the contractor lumped it in with in general a description with the condition banks, et cetera, that the Sanitary Ship Canal has and the south fork has.

MR. ANDES: Okay. And I guess we're questioning that. We're wondering why one would think Bubbly Creek would be similar to the Ship Canal, particularly for aquatic purposes? So I'm looking for the documentation of that given significant differences that are fairly obvious.

MR. SULSKI: Well, on Page 444, the contractor describes it as consisting of vertical docked walls with an average width and depth of 200 to 250 feet -- I'm sorry -- that's the -- that's the south fork. Channel consists of steeply sloped earthen or rock, and several locations have vertical dock walls as an average width and depth of -- width of 100 to 200 feet, depth of 3 to 13 feet, respectively the channels riparian land uses dominated by industrial and commercial

uses upscale single-family home development is being constructed. Its current designation is secondary contact.

MR. ANDES: I'm trying to understand how it's similar to the Sanitary and Ship Canal especially given that the depth is substantially different.

MR. SULSKI: Well, they classified the depth as 3 to 13 feet. They go to the south branch and they classify it as 15 to 20 feet deep, so there's a disparity in depth. But otherwise the general conditions of the water body are similar to the south fork.

MR. ANDES: How about the --

MR. SULSKI: It's a little narrower. Well, the stream velocity is something that we dealt with stagnant, you know, and we recognize that, and that was --

MR. ANDES: But the question then is given the stagnant nature, does that affect whether it is even feasible to attain the same use as the Sanitary and Ship Canal?

MR. SULSKI: Well, that was one of the stressors that we identified in the UAA, and

that's why the south fork was -- It was suggested that flow augmentation and supplemental aeration should be, you know, were the depth reach was a good candidate for those stressor removers.

MR. ANDES: And was there an assessment of the extent to which that will lead to a certain type of population in Bubbly Creek by taking those measures, that they will have the same type of population as, say, the Sanitary and Ship Canal or other similarly-classified waters?

MR. SULSKI: It was basically level the playing field for the south fork so it had similar flow regimes and could maintain similar water quality as those other systems as those nearby reaches.

MR. ANDES: Did you consider as well the pumping stations?

MR. SULSKI: Which pumping stations?

MR. ANDES: The RAPS.

MR. SULSKI: RAPS?

MR. POLL: Racine Avenue Pumping Station.

MR. SULSKI: We do know the Racine Avenue Pumping Station was there, and that was common knowledge among the stakeholders.

MR. POLLS: Did you consider the impact, the impact of that station when it pumps?

MR. SULSKI: The impact of that station, we have -- There was some analysis done contained in the UAA report on what happens to the dissolved oxygen in the south fork and in the south branch and the Sanitary and Ship Canal after a storm event related discharge from the Racine Avenue Pump Station. Basically the DO just bottoms out.

MR. ANDES: Okay. And does the Agency think that the supplemental aeration will bring that back into compliance with the standards during those events when Racine Avenue is pumping?

MR. SULSKI: I don't know about during those events when the Racine Avenue Station is pumping. It pumps infrequently.

MR. ANDES: I'm going to go back to our prefiled questions, and Question I. The

UAA Attachment B stated that the CAWS is functionally similar to the Cuyahoga River Ship Canal in Ohio, yet the IEPA proposed DO criteria are much more restrictive within the CAWS than those assigned to the Cuyahoga River.

MS. WILLIAMS: I think that's testimony. I don't think that's in the record anywhere.

HEARING OFFICER TIPSORD: Page 5A.

MS. WILLIAMS: No, no. The second sentence.

MR. ANDES: Is the Agency aware of what the DO criteria are on the Cuyahoga Ship Canal?

MR. SULSKI: No.

MR. ANDES: Okay. So the Agency hasn't assessed whether its DO criteria here are more or less restrictive than the ones on the Cuyahoga?

MR. SMOGOR: No.

MR. ANDES: Further testimony on that issue can be provided later.

In determining the DO standard,

did you consider the DO model results previously done by the district and the fact that additional modeling will be conducted, is being conducted, to evaluate integrated strategies for DO compliance? And if not, why not?

MR. SULSKI: Which model results are you talking about?

MR. ANDES: Modeling conducted as part of the integrated strategy process. Is the Agency not familiar with the DO modeling results provided by the District?

MR. SULSKI: When and where? There are a number of DO modelings that have been done.

MR. ANDES: Marquette University, duflow model.

MS. WILLIAMS: What did you say? I can't hear you.

MR. ANDES: Marquette University work, the duflow model. I believe the report prepared by Dr. Melching for the District.

MR. SULSKI: Is it --

MR. ANDES: We believe the Agency has

it.

MR. SULSKI: I don't know whether I've read the report. I know Dr. Melching, I know of modeling that's going on. I don't know which modeling Dr. Melching is involved in.

MR. ANDES: Okay. So can we find out if the Agency has that report, and, if so, whether it has considered it? Although it sounds like probably not, considered it in controlling the DO standard.

MS. WILLIAMS: If you'd like him to check and see if it's cited in the UAA, we can.

MR. SULSKI: There were two reports submitted by the district during the UAA process which we have as attachments here. If you can tell me whether this Melching duflow model is in there, then I can tell you that I read it. There's two reports: 4WQ technical memorandums and 5WQ. One is supplemental aeration and another one is augmentation of flow augmentation.

MS. WILLIAMS: These are OO and PP.

MR. ANDES: Aren't those the reports

on cost? Those are the narrative reports, aren't they?

MR. SULSKI: They're just on costs. I don't know whether I read the Melching report. I know that I attended some seminars by the District, but.

MR. ANDES: All right. So the question we'd like to find out what DO model's information provided by the District is in the record and has been considered by the Agency.

MS. WILLIAMS: Can I ask the first question? Are you saying that this model that you cited is the District saying that they did provide it to the Agency?

MR. ANDES: Yes. We believe -- There is information we have provided to the Agency which we believe shows complexities on the DO issue that we're trying to understand whether those were considered by the Agency developing the standards.

MS. WILLIAMS: Do you know approximately when that would have been submitted?

MR. ANDES: About a year ago.

HEARING OFFICER TIPSORD: And, just for the record, since we're talking about this report, I assume someone is going to submit it to the record?

MR. ANDES: One way or another.

HEARING OFFICER TIPSORD: Thank you.

MR. ANDES: I'm informed it may have been part of a quarterly report to the Agency regarding the UAA process.

The next question, and I'll try to not offer any testimony. I'll skip to the question directly. Did IEPA consider the seasonally stagnant thermally stratified conditions known to occur within the CAWS as they relate to appropriate posed DO criteria?

MR. SULSKI: We know that they exist, those conditions.

MR. ANDES: And were they considered in developing the criteria for DO?

HEARING OFFICER TIPSORD: Question K.

MR. SMOGOR: Thanks. Is there anywhere you can point to to help us? We're not -- I guess we're not convinced that there

is thermal stratification conditions, but we're not aware of the information that would show that. Is there anywhere that you can point to on the record that would show that?

MR. ANDES: We can certainly look at that and provide any relevant information. How about the seasonally stagnant part?

MR. SMOGOR: Given that we've proposed an aquatic life use that we believe is consistent with what we're calling the irreversible impacts to the system, to that extent I believe it's been considered.

MR. ANDES: And how? How has it been considered?

MR. SMOGOR: Well, if those are -- If what's called, quote, seasonally stagnant, unquote, conditions are the result of the irreversible -- the level of irreversible human impact that has occurred in those systems, then we are setting our aquatic life goal consistent with that; in fact, in effect, allowing for that. And then the standards that we've proposed are set to attain the proposed aquatic life goal. So

we've lowered our goal somewhat in terms of aquatic life from the Clean Water Act aquatic life goal.

MR. ANDES: And you specifically considered the seasonally stagnant aspect as part of that?

MR. SMOGOR: I don't know how -- if it was specifically considered, but if that seasonally stagnant aspect is part of what we've considered the overall level of human impact or results from the overall level of irreversible human impact, then it is kind of built into the proposed aquatic life use.

MR. SULSKI: What seasonally stagnant do you refer to? What do you mean by that?

MR. ANDES: I'm not sure we need to offer evidence on that at this point. I think I'll take the answer and we'll move on from there. We can offer evidence on that at a later point.

The next question is whether the Agency has considered the effect of stratification and bidirectional flow on low DO in developing the criteria?

MR. SMOGOR: Again, my point about stratification relates here, as it did to the prior question. And, again, if those are situations that are a part of what we're -- what would be considered the irreversible level of human impact, then indirectly they're accounted for in proposing the use that is lesser than the Clean Water Act aquatic life use.

MR. ANDES: So it appears these issues may not have been specifically addressed, but you, the Agency's thought is that they may have been addressed as part of the overall assessment of the conditions of the water bodies?

MR. SMOGOR: I think that's appropriate, at least from the CAWS UAA, yes.

MR. ANDES: Which was based primarily for aquatic, not habitat, correct?

MR. SULSKI: Correct.

MR. ANDES: Thank you. I think the next question has been asked and answered and the one after that.

The next question I had again

with the prefiled testimony was on Page 4, Paragraph 1, and I think we're still on Mr. Smogor's testimony --

HEARING OFFICER TIPSORD: Before you start the next, that's Question No. 8, before you start that, let's take a 15-minute break.

(Short break taken.)

HEARING OFFICER TIPSORD: I think we're ready to begin with Mr. Andes' Question 8.

MR. ANDES: This question is, I believe, for Mr. Smogor. On Page 4, Paragraph 1 of your prefiled testimony, you state the dissolved oxygen standards be proposed by the Illinois EPA are based primarily on criteria and corresponding justification and US EPA's national criteria document published in 1986. Illinois EPA used this document as a foundation from which to interpret and incorporate more recent information specifically applicable to the dissolved oxygen needs of aquatic life in Illinois waters. My question there is, what was the more recent information that was used

in establishing the DO standards?

MR. SMOGOR: The term, quote, recent information, unquote, in this case was intended to mean the concepts and the principles presented in the technical support document that Illinois EPA and Illinois DNR submitted for the most recent rulemaking for dissolved oxygen in general use waters.

MR. ANDES: Okay. And can you explain how that modified the Agency's conclusions starting with the EPA criteria document as a foundation? Did that change your conclusions that you would have reached in using the EPA criteria document?

MR. SMOGOR: No, no. Our -- the technical support document that I just referenced is the process and the thinking that we use to come up with the dissolved oxygen standards for the general use waters, and that technical support document relied heavily upon the U.S. EPA 1986 national criteria document.

MR. ANDES: So I'm trying to figure out what it added.

MR. SMOGOR: What it added. What I'm referring to here in terms of recent information, it added a process for interpreting that information from the 1986 U.S. EPA National Criteria Document which I believe is on the record Attachment X. And it provided how we use that information as a foundation, and we used more recent information which is also referenced in that technical support document, more recent information to address what are the dissolved oxygen needs of Illinois aquatic life.

MR. ANDES: Okay. And what specifically -- what's that Illinois specific information?

MR. SMOGOR: There is Illinois specific information provided in that technical support document, for instance, lists of species that were determined to be more dissolved oxygen sensitive than others, fishes and macroinvertebrate species, for example. And the technical support document included a process, kind of our thinking for how we arrived at the dissolved oxygen

standards that we recommended for general use waters. That same thinking, that same logic, those same principles and concepts which were based on the U.S. EPA 1986 criteria document were used in the process for this rulemaking as well.

MR. ANDES: And you used the Illinois specific list of species from the technical support document in developing the CAWS DO standards?

MR. SMOGOR: No, no, not directly, not directly. But that was just an example of information that was Illinois specific that was in that technical support document.

MR. ANDES: Was there any other Illinois specific information technical support document that you then used in developing the DO standards for the CAWS?

MR. SMOGOR: Not in terms of direct data or lists, but, like I said, that technical support document pretty much defines the thought processes and the justifications for proposing dissolved oxygen levels at the -- for our proposed levels of

dissolved oxygen that will protect aquatic life.

MR. ANDES: No additional data or other information beyond that process from the technical support document that was used in this rulemaking?

MR. SMOGOR: Not in terms of specific data, no.

MR. ANDES: On Page 5, Paragraph 3 of your prefiled testimony, you state for the CAWS Aquatic Life Use A waters, Illinois EPA proposes dissolved oxygen standard similar to those for the Upper Dresden Island Pool, but designed to protect for less optimal fish growth that is consistent with the proposed aquatic life use designation. Can you define less optimal fish growth?

MR. SMOGOR: That terminology was intended to represent fish growth rates that are less than those required to attain Clean Water Act aquatic life goal. To attain aquatic life use that we propose for CAWS A, CAWS A waters do not require the same long-term dissolved oxygen conditions that

would be required in waters with a higher biological potential reflecting the Clean Water Act goal.

MR. ANDES: The question is not what the standards are, the question is how do you define optimal versus less optimal? How can we envision those two situations for a fish community?

MR. SMOGOR: Again, it was just use in the a relative sense. We realized that optimal, another way of defining optimal, at least in this context, would be at a level that -- at a level that allows you to achieve the clean water aquatic life goal.

MR. ANDES: That's sort of circular. I'm asking you how do you define it with reference to the data. How do you look at two fish communities and say this one is optimal in terms of growth and this one is less optimal? What are the metrics you would use to define that?

MR. SMOGOR: We didn't look specifically at fish growth data, so I'm only using those terms in a very general sense

here.

MR. ANDES: If you didn't look at fish growth data, how could you make a distinction between a water body where the standard is designed to protect for optimal versus less optimal fish growth?

MR. SMOGOR: We're talking about levels that are -- and maybe this will help. These levels are defined for levels of fish growth in qualitative terms with a little bit of quantitative backing are provided in the U.S. EPA 1986 national criteria document, Attachment X. These various levels are addressed, and that's what we're basing this information on. We're basing it on levels of fish growth that are required to attain the Clean Water Act goal and then knocking it down from there saying, well, if you need this amount of fish growth, an optimal amount will --

MR. ANDES: Give me numbers. What --

MR. SMOGOR: I'm trying to think back to that report. I think the level that we are suggesting -- and, again, there's caveats

in that report. To say you can't make a translation directly from a measured level growth to define your goal. There are caveats. But I believe that a 20 percent reduction in growth rate is equivalent, or at least roughly equivalent, to what I'm calling less optimal here. And that's consistent, we believe that's consistent with the interpretations of the national criteria document, Attachment X.

MR. ANDES: The 20 percent is in the EPA criteria document?

MR. SMOGOR: Let me check on that. I can give you a page number even. Page 30 in Attachment X, and, actually, I think they start to address this concept maybe on Page 29 and 29 through pages -- 29 through 33 address those issues in Attachment X. Those are the pages from Attachment X.

MR. ANDES: And does the less optimal fish growth relate to a specific life stage or to the larva or the young and/or adult or all of them? How is that assessed?

MR. SMOGOR: The standards we propose

for CAWS A reflect an allowance for less optimal growth across all life stages.

MR. ANDES: But the Agency hasn't actually looked at any data in terms of any of those life stages, right?

MR. SMOGOR: We have not looked at growth rates for fish in the CAWS for those life stages.

MR. ANDES: Thank you. We'll move to the Use B waters with the next question. On Page 6, Paragraph 2 of your prefiled testimony, you state for the third set of waters called Chicago Area Waterway System and Branden Pool Aquatic Life Use B Waters, the proposed dissolved oxygen standards are consistent with the incrementally lower biological potential of these waters compared to cause Aquatic Life Use A waters. Please define incrementally lower biological potential.

HEARING OFFICER TIPSORD: That's Question 11.

MR. SMOGOR: Thank you. By, quote, incrementally lower biological potential,

unquote, we're referring simply to a level that's lower than that is attainable in CAWS A waters.

MR. ANDES: All right. So if you define the CAWS A waters with reference to a 20 percent reduction in fish growth rate, are you defining the Use B by a higher percent reduction in fish growth rate or is there some other metric?

MR. SMOGOR: No. I wouldn't equate fish growth and biological potential here. Those are two different aspects.

MR. ANDES: Help me understand biological potential and what -- how you measure that.

MR. SMOGOR: Biological potential is, again, in reference to aquatic life goal of the Clean Water Act, and biological potential, it's measured -- one way to measure it is with an index of biological integrity.

MR. ANDES: Well, I thought, though, that it was earlier said that IBIs really weren't a good way of looking at potential,

that you were using more of the habitat index?

MR. SMOGOR: No. I said that existing conditions don't necessarily fully inform you about potential conditions, but ways of measuring biological condition, whether it be -- well, obviously you can't measure something into the future, but ways of measuring biological condition include something like an index of biointegrity.

MR. ANDES: But here we're talking about biological potential, not biological conditions. So the question is, are you saying that B waters are defined with reference to A waters simply based on their QHEI scores which go toward potential or something else?

MR. SMOGOR: The use that we proposed for CAWS B represents a level of biological condition that is a potential condition, and we believe that is lower than the potential CAWS A waters. And that determination is largely based on looking at physical habitat information.

MR. ANDES: It seems, and tell me -- help me understand this. It sounds like the distinction between the Clean Water Act goal and the Use A waters was premised more on the less optimal fish growth, but then the difference between Use A and Use B was premised on these biological potential. I'm trying to understand why we have different metrics being used in those two situations.

MR. SMOGOR: I don't believe that's accurate, so I'll try to give you another explanation to try to clarify. Sorry.

When we're talking about setting dissolved oxygen standards for different levels of attainable biological condition, on the one hand for a higher level of attainable biological condition or a higher level of biological potential, you probably need more stringent, for lack of a better term, dissolved oxygen standards, and that's what we've proposed. They're a little more demanding for CAWS A waters than they are for CAWS B waters, and what we're allowing, in both of those waters, is for

levels of DO that are even less than the DO you would need if you wanted -- if you wanted to attain the Clean Water Act goal. So that's why I use the word incremental. Your expectations are incrementally stepped downward from the Clean Water Act goal. And it seems to make sense to us that in some aspects of these dissolved oxygen standards, you can become a little less demanding as well.

MR. ANDES: And in going down to Use A, you define the extent of deviation from the goal by saying less optimal fish growth at that point, 20 percent reduction in growth rate. So I'm trying to understand then how do you define the step down to Use B in the standards?

MR. SMOGOR: In terms of dissolved oxygen, we're not -- we're not asking for any or demanding any less reduction in fish growth.

MR. ANDES: In Use B waters?

MR. SMOGOR: In Use B waters.

MR. ANDES: Why not?

MR. SMOGOR: Because we believe that in setting the dissolved oxygen standards, your first line of defense is to say don't let fish die, prevent lethal conditions. And by taking that first line of defense in the CAWS A and CAWS B waters, you're accounting well enough for the less acute effects, you're accounting well enough for the chronic effects, potential chronic effects. So there really isn't -- We aren't expecting any lesser fish growth in CAWS B waters than in CAWS A waters. The way -- for the dissolved oxygen standards, the way they're set.

MR. ANDES: Why not if they have lower biological potential?

MR. SMOGOR: Well, the difference between the two is we're affording for CAWS A waters in terms of dissolved oxygen standards. The big difference is we're affording enhanced or special protection for early life stages that we're not affording to CAWS B waters.

MR. ANDES: Okay. But it sounded -- you say like the issue you're focussing on

there was fish growth across all life stages, okay? So -- and then you said and we have incrementally lower biologic potential generally defined for Use B. And I'm trying to understand why that only extends to the early life stage issue and not across the board.

MR. SMOGOR: I think it might be helpful -- Would it be helpful if I walked through kind of the rationale of these DO standards from -- if I could refer to the table that has these standards in our statement of reasons, Page 60.

MR. ANDES: Absolutely.

MR. SMOGOR: I'll try to outline our general reasoning, and probably the easiest way to do this, given that it is complicated, is to walk from the bottom row up. And so on the bottom row of the table on Page 60, we have the proposed aquatic -- or the dissolved oxygen standards that we've proposed for the CAWS B and Branden Pool waters. And these are what I'll call the least demanding set of DO standards that we've proposed. So if we

look at that bottom row, we're not affording any extra or special protection for early life stages, but what we're doing is we're looking at later life stages and we're saying we're going to try to create conditions or we're creating conditions that aren't lethal to what later life stages of fish. And that's what that 3.5 is in terms of the daily minimum, and that's also what the 4 is in terms of that 7-day mean of daily minimum. If you think about an average of daily minima across seven days, what this is saying with the four is don't let too many days in a row have a minimum that is just above 3.5. Because that can be just as lethal to a fish as going below 3.5. So that's what those two criteria together are attempting to do for CAWS B waters. And by doing so, given that we have the lowest expectations, so to speak, we've set the lowest bar for the aquatic life use in CAWS B. By protecting at those levels against these lethal effects, we believe we're consistent with protecting for enough growth, enough fish growth that would allow

us to attain the proposed aquatic life goal. And we believe that is consistent with the logic and the information that's in the U.S. EPA 1986 document Attachment X. So that's where we're starting.

MR. ANDES: So their rational, those standards protect against lethality will have a corollary effect of addressing the fish growth?

MR. SMOGOR: They protect for enough fish growth to attain the goal that we've proposed for that water, based on the information, based on the information in the U.S. EPA National Criteria Document.

MR. ANDES: That goes back to the EPA criteria document and the lower growth rate it sounds like you've defined for A and B waters the same, the lower fish growth of, say, 20 percent reduction from the base number.

MR. SMOGOR: Yes, yes. Do you want me to continue?

MR. ANDES: Go ahead.

MR. SMOGOR: The next row up which

represents CAWS A waters, again, our aquatic life goal for CAWS A waters is a little bit higher, although still short of Clean Water Act aquatic life goal. We're saying, again, don't allow for lethal conditions. And, in this case, we're offering a little bit of extra protection, enhanced protection for lethality, to prevent lethality of early life stages. And, again, we believe that's consistent with the information provided in Attachment X. Now we're saying to attain this higher goal, we have to afford a little extra protection for the early life stages, and we're setting that at a daily minimum of five, and that's the only difference between the DO, proposed DO standards for each set of waters in CAWS A, CAWS B, plus Branden Pool.

MR. ANDES: And the rationale, again, for adding that for the Use A waters, adding that particular aspect does what?

MR. SMOGOR: Is to provide what we believe is extra protection for early life stages that would allow you to attain that even higher bar that you've set for the

CAWS A waters in terms of aquatic life.

MR. ANDES: Be specific. How does it make the population different by having that standard.

MR. SMOGOR: I'm not sure I understand the question.

MR. ANDES: What difference does it make in the community, and don't say it's nearer to the Clean Water Act goal. I need to know more specifically, how does that community then differ, the community supported by that set of standards, differs from the Use B standards?

MR. SMOGOR: In terms of protection, and, again, this all comes with the caveat that we do not know the specific dissolved oxygen requirements of most Illinois stream fish species, we do not know the specific dissolved oxygen requirements of all the life stages of most Illinois stream fish species, but we do know from the U.S. EPA -- Attachment X, U.S. EPA National Criteria Document, we do know those requirements for at least some of the species that will occur

in these waters; namely some of the key species here with those thresholds shall channel catfish and large mouth bass. In terms of these criteria, if you're going to protect for early life stages of fish that have early life stages that are as sensitive as channel cat and probably even small mouth bass, then you have to keep the DO above five if you're going to protect for those types of early life stages.

MR. ANDES: Which kind of bass is that?

MR. SMOGOR: Let me say it again. For early life stages that are as sensitive as the early life stages of channel catfish or small mouth bass, we need to keep the dissolved oxygen levels above a daily minimum of five in order to protect for those types of early life stages.

MR. ANDES: And you're saying that's, again, based on the EPA criteria document.

MR. SMOGOR: Yes.

MR. ANDES: Okay. And then keep going and explain how you move on from there.

MR. TWAIT: Could we just --

MR. SMOGOR: There seems to be some fish names that are kind of wacky in themselves, but there's a figure in the dissolved -- in the U.S. EPA document, National Criteria Document, and bear with me, please. There's also narrative that talks about and interprets this. But on Page 14 that's an important figure to some of the interpretation that were reached later in this document, some of the conclusions. It's not the sole source of all information, but this is a document that -- on Page 14 there's a figure that shows that in general terms when your early life stages of channel catfish and early life stages of small mouth bass of the few species that were tested seem to be some of the more sensitive ones and they need -- they've argued that in order to protect for them, early life stages of species that are that sensitive, you need to keep dissolved oxygen up around five. That's where that comes from.

MR. ETTINGER: Can I just -- and our

judgment between A and B is that we think there's habitat suitable in the A waters to have those early life stages, but we don't think there's suitable habitat for the early life stages in the B waters?

MR. SMOGOR: Yes. For fishes that were -- again, we're taking some of our guesses on all the other species that we don't know their individual DO requirements, but we're reasoning that we think it's reasonable to protect for small mouth bass and channel catfish in CAWS A waters to protect fully for the early life stages because we believe that those systems can support those early life stages in terms of the habitat required for spawning and rearing and development of those early life stages.

MR. ANDES: Okay. And then explain how you move up from there.

MR. SMOGOR: You haven't asked me about Upper Dresden Island Pool.

MR. ANDES: I have a feeling a few people would like to know.

MR. SMOGOR: You're jerking with me.

I figured I'd jerk with you.

MR. ANDES: Now we're even.

MR. SMOGOR: Totally a joke. I respect your position.

MR. ANDES: No offense taken.

MR. SMOGOR: The next level going up is Upper Dresden Island Pool, and because we've proposed a use, an aquatic life use for Upper Dresden Island Pool that is at a minimum consistent with the aquatic life goal, we've pretty much just repeated what we've proposed for general use waters that weren't offered the enhanced protection in the other rulemaking, the docket R4-25 rulemaking I'm referring to.

MR. ANDES: Okay. Let's move on to the next question in discussing the CAWS Aquatic Life Use A waters. On Page 5, Paragraph 3 of your prefiled testimony, you state for sufficient protection under such limited growth situations EPA's 1986 National Criteria Document provides chronic criteria in 5.0 milligrams per liter and a daily mean average across seven days early life stages.

Early life stages EPA provides analogous criteria of 4.0 milligrams per liter. Page 6, Paragraph 1 of your prefiled testimony you state, Illinois judges that this level of protection is sufficient to attain an already limited growth potential for fish in these waters. So the first question is in terms of using the 3.5 instead of 3.0, why is IEPA criteria more protective than the EPA criteria document?

HEARING OFFICER TIPSORD: For the record, this is Question 12A.

MR. SMOGOR: If you're asking about the 3 and 3.5 difference, was that in perhaps an earlier question, not this one in particular? Just to --

MS. WILLIAMS: You've rephrased this question, right, make it clearer? I think you made it clearer.

MR. ANDES: I rephrased it, yes.

MS. WILLIAMS: It's 12A, but he's being more specific.

MR. SMOGOR: So you're asking in terms of why did we propose 3.5 as a daily minimum,

and what's the justification for that?

MR. ANDES: Yes.

MR. SMOGOR: In U.S. EPA National criteria document, Attachment X, the table that -- the document does provide justification for 3.5, and that is addressed in Table 8 on Page 34. If you look at the reference to footnote No. 4, and then reference from that footnote to an explanation on Page 37, we believe the National Criteria Document does provide justification for waters that have manipulatable discharges that the National Criteria Document does recommend setting or offer as an option setting that daily minimum to a 3.5 under those situations.

MR. ANDES: Manipulatable discharges?

MR. SMOGOR: Manipulatable discharges.

MR. ANDES: Meaning?

MR. SMOGOR: I think they talk about how dissolved oxygens can be -- dissolved oxygen can be controlled somewhat.

MR. ANDES: Can't that always be -- You're talking about by putting more air in?

MR. SMOGOR: Yes. I think that's what they're referring to here.

MR. ANDES: Wouldn't that be done on a lot of water bodies? I'm trying to understand the distinction here in terms of --

MS. WILLIAMS: I'd like to sort of clarify the way we handled the references in the back of the statement of reasons. We did not provide the technical support document from the dissolved oxygen rulemaking. We simply referred to the pending docket, and I believe these issues were discussed in detail before the board in that pending docket. So there may be more information that we relied on in that docket generally as well.

MR. ANDES: And will that information be put into this docket? We don't have to go through that whole docket, right? Any information relative to this rulemaking should be put into this docket. I'll request that.

MS. WILLIAMS: So are you saying with regard to the 3.5 -- Because the original

proponent of that rule IEWA proposed the 3.5 minimum that ended up in the final rule. So I'm not sure there was very much controversy about establishing 3.5.

MR. ANDES: Was that for the CAWS?

MS. WILLIAMS: For the state. And that's was we relied on, what we've done for the rest of the state.

MR. SMOGOR: That's to prevent lethal conditions. And I believe that part of the docket for R4-25 addresses this aspect that I referenced in the tech -- sorry -- the National Criteria Document, Attachment X, as part of the basis for suggesting that 3.0 instead of 3 as the data.

MR. ANDES: So you're saying that in your -- what did you say your explanation of why you used one instead of the other?

MR. SMOGOR: I believe that there's justification on Page 34, and by reference Page 38 -- 37 and 38 of the U.S. EPA National Criteria Document, Attachment X. I believe there's sufficient justification in that document to propose 3.5 as a daily minimum.

MR. ANDES: Next question, what is the scientific basis for IEPA to propose DO standards of above 5.0 milligrams per liter at all times for early life stages and seven day averages of daily minima of 4.0 for other life stages in the CAWS? And I think in particular the question is if the EPA 5.0 was the daily mean average across seven days for early life stages, why did the Agency decide to do that as a daily minimum?

MR. SMOGOR: Actually, the daily -- The U.S. EPA National Criteria Document includes both -- includes thresholds for both averages of daily averages and averages of daily minima so that the document -- maybe I'm misunderstanding your question.

MR. ANDES: So when your proposal is for a daily minimum of 5.0 for Use A waters, are you saying that's consistent with the EPA recommendation of 5.0, which seem to be more of an average across seven days?

MR. SMOGOR: Yes. I believe that when we said, again, referring to Page 60 in our statement of reasons, the second row from the

bottom for CAWS A waters, we proposed for early life stages protection a daily minimum of 5.0. I believe that's consistent with U.S. EPA National Criteria Document for the reasons we talk about earlier in terms of the most sensitive early life stage fish.

MR. ANDES: So you think the EPA document recommended use of a daily minimum rather than a seven-day average daily minimum?

MR. SMOGOR: Both.

MR. ANDES: And both under which circumstances?

MR. SMOGOR: I'll try to go through this again.

MR. ANDES: What's the reason for one rather than the other?

MR. SMOGOR: Page 60 of the statement of reasons.

MR. ANDES: Refer me to the EPA document. If the EPA document is both, tell me what circumstances does it say to use one or the other.

MR. SMOGOR: In Table 8 on Page 34 of

the U.S. EPA document -- This is a little confusing because there is more in here than what we're addressing. Forget about the left-hand side of that table where they call a cold water criteria. If you look under the warm water area, you'll see at the very last row of the table U.S. EPA suggests that 5.0 daily minimum for early life stages. That's where we're getting it. Also for early life stages, they propose a 7-day mean which is a seven-day average of daily averages or of daily means. So both of those criteria are recommended for protection of early life stages. And so your question is what from there?

MR. ANDES: You're saying they recommend both and you picked --

MR. SMOGOR: For CAWS A -- now I see where you're getting. For CAWS A that level of 6 assumes, and, again, that's what we're calling more of a chronic condition, that's not to protect necessarily against death, but to protect against chronic conditions that can impede you from reaching potential of the

water body which addresses, in particular, for example, fish growth. That level of 6 there is a level that would allow you to reach -- to have enough fish growth to attain the Clean Water Act goal. But because we're setting for something a little less than the Clean Water Act goal for CAWS A waters, it allows you to set a seven-day mean at a lower level. And when I tried to explain in the statement of reasons and in my prefiled testimony that if you set that lower level that's allowable, it would be automatically covered by assuring that the daily minimum doesn't ever go below five. So you're already covered. You're already protecting -- with a daily minimum of 5 CAWS A waters for early life stages, you're already protecting enough for enough growth. Even though it's not this optimal level of growth, you're protecting for enough growth to achieve the proposed goal of that water body that we've set.

MR. ANDES: Let me move on to some additional questions on -- actually, as I

review my -- couple of follow-up questions on dissolved oxygen, and then I think we'll be done with dissolved oxygen.

I want to go back. There was a short discussion earlier of fish kills, and I want to focus in particular on Cal-Sag Channel. Have fish kills been reported to the IEPA in the last five years for the Cal-Sag Channel?

MR. SULSKI: What page are you on, Fred? Because I think that I remember that question.

MR. ANDES: There is a question. I think it's on Page 4 of our prefiled testimony, specifically considering concerning the fish kills on the Cal-Sag Channel.

MR. SULSKI: Page 4, No. 16.

MR. ANDES: Yes. And the Cal-Sag right now is a minimum daily DO of 3.0. So the first question was how many significant fish kills have been reported to the IEPA in the past five years for the Cal-Sag Channel?

MR. SULSKI: I have not received any

reports of fish kills in the Cal-Sag in the last five years.

MR. ANDES: Okay. So the question then -- I'll skip the next couple. Can you explain then why you need a higher minimum daily DO standard now for the Cal-Sag Channel?

MR. SMOGOR: Based on the information that we have and the information and interpretations in the U.S. EPA National Criteria Document, in addition to our interpretations and usage of the national criteria document, Attachment X in our technical support document for the previous dissolved oxygen rulemaking, we believe that you need to maintain a daily minimum of 3.5 milligrams per liter to avoid undesirable lethal conditions for fish.

MR. ANDES: Have you seen undesirable lethal conditions for fish in the Cal-Sag in the last five years with the DO standard of three?

MR. SMOGOR: I believe that if the DO was three, then based on our analysis that

would be undesirable.

MR. ANDES: The standard right now is 3, and that hasn't seemed to allow for lethal situations.

MR. SMOGOR: Well, I guess if you're saying that do fish need -- every time fish die or are faced with potentially lethal situations, do we have that documented? No. We don't have that explicitly documented. But not having evidence of either fish avoidance or fish death doesn't mean that fish aren't out there dying or avoiding.

MR. ANDES: It also doesn't mean that the current standard is not protective, right? I'm asking for information showing that the current standard is not protective on lethality.

MR. SMOGOR: And the information we're providing is we believe that the National Criteria Document would suggest under these circumstances that a 3.5 should be maintained. That is our basis for going 3.5.

MS. WILLIAMS: Do you know what the DO levels are, have been over the past five

years in the Cal-Sag Channel?

MR. SMOGOR: No.

HEARING OFFICER TIPSORD: Mr. Harley had a follow-up.

MR. HARLEY: That was my question.

MR. ANDES: Next question, and I think part of this may have been answered. But the next question in the prefiled is No. 17. The IEPA proposal for Aquatic Life Use A waters specifies a daily minimum DO of 5.0 from the months of March through July. The first question was to identify the fish and benthic species living in Use A waters in the CAWS that need this high of a DO concentration to thrive. And from your earlier answer, I guess I'm questioning are we talking about small mouth bass and channel catfish?

MR. SMOGOR: Yeah. We don't know the specific requirements across all life stages and across many of the species of Illinois stream fish, but in general based on the information and the National Criteria Document and our subsequent interpretations and usage of that information, any species

whose early life stages are as sensitive to low dissolved oxygen as are the early life stages of channel catfish need DO maintained at 5.0 milligrams per liter or above.

MR. ANDES: So are there channel catfish and small mouth bass in the Cal-Sag Channel? Does the Agency have any information on that?

MR. SMOGOR: Yes. I think there's some available information in Attachment B which is the CAWS UAA report and --

MR. ANDES: Okay.

MR. SULSKI: The MWRD 2001-2006 attachment -- 2005.

MR. SMOGOR: I think that's Exhibit 28.

MS. WILLIAMS: Speaking of Exhibit 28, last time we apparently provided an incomplete copy of it. Can we enter it now, please.

HEARING OFFICER TIPSORD: Sure. Roy?

MR. SULSKI: Page 4-98 in Attachment B.

MS. WILLIAMS: I'm handing you what's

titled Metropolitan Water District of Greater Chicago Ambient Water Quality Monitoring Program Sampling Stations.

HEARING OFFICER TIPSORD: If there's no objection, we'll mark this as Exhibit 48. Seeing none, it's Exhibit 48.

MS. FRANZETTI: Do I understand correctly that it effectively replaces Exhibit 28? Is it just a complete copy of Exhibit 28?

MS. DIERS: Yes.

MS. WILLIAMS: Yes. We can replace Exhibit 28, if you want.

MR. ANDES: Exhibit 28 is now inoperative.

MR. SULSKI: I misspoke on the table in Attachment B. It's on Page 4-93. Table 4-58 is the Cal-Sag Channel.

MR. ANDES: And what does that show you?

MR. SULSKI: It shows you the presence of small mouth bass, channel cat, white sucker, among other species.

MR. SMOGOR: And in Exhibit 28, which

we've just augmented --

HEARING OFFICER TIPSORD: Replaced.

MR. SMOGOR: Replaced, I'm sorry. There is, again, presence of channel catfish and small mouth bass in Calumet Sag Channel.

MR. ANDES: How many?

MR. SMOGOR: At least the page I'm looking at. I'm not sure if these are single fish samples or not.

HEARING OFFICER TIPSORD: What's the page number?

MR. SMOGOR: I hope they're the same ones. Page 4 of 5 in the table titled Cal-Sag Channel at the top or real near the top of your Page 4? Actually, let me look to make sure I have the right page. I'm going to hold off and make sure I'm looking at the current exhibit.

MS. WILLIAMS: When you change the margins on the tables, sometimes they don't print out the same number of pages.

MR. SMOGOR: For example, on Page 9 of 14 in the current exhibit -- Exhibit 48 which was just distributed, the ninth page in, it's

actually identified as Page 9 of 14 at the bottom. If I'm on the right page, the very last section of that table, the bottom section of that table says Calumet Sag Channel provides sufficient data from Calumet Sag Channel. I'm not sure. Right offhand I'm not -- these are summaries of the number of fish collected, I guess, by years here.

MR. ANDES: Let's go into that a little bit. The first station on the Cal-Sag, Station 58, are there any channel catfish or small mouth bass?

MR. SMOGOR: No, not in that list there. Ashland Avenue. Is that what you're referring to?

MR. ANDES: Right. The next one which is a SEPA aeration station, am I right that there are -- were two small mouth bass and four channel catfish?

MR. SMOGOR: Yes. That's what the table is indicating.

MR. ANDES: Turning the next page to Station 59, Cicero Avenue, any channel catfish or small mouth bass?

MR. SMOGOR: No.

MR. ANDES: The next station which is a SEPA aeration station, there are -- there were four small mouth bass and no channel catfish. Am I right?

MR. SMOGOR: Right.

MR. ANDES: And at Station 43 at Route 83, there were no channel catfish or small mouth bass?

MR. SMOGOR: Correct.

MR. ANDES: Okay. And at SEPA station No. 5, there were 15 channel catfish, no small mouth bass. Am I right?

MR. SULSKI: Yes.

MR. ANDES: So the only channel catfish and small mouth bass are around the aeration station, correct?

MR. SULSKI: According to this table, yes.

MR. ANDES: Thank you.

HEARING OFFICER TIPSORD: Can I ask a question? I'm getting very confused looking at these tables, and now the header we have one of two, 9 of 14, 9 of 14, and then

umpteen of 13. So we have four different sets of data here. They all have -- at least two of these have the exact same heading. Total fish pounds -- okay versus number. I'm sorry. I stand corrected.

MS. WILLIAMS: It is confusing. There are four spreadsheets.

HEARING OFFICER TIPSORD: It is very confusing. And in the future we need to do one of two things: We either need to number them 1 through 25, or if we're going to submit separate documents as one group exhibit like we did with the previous exhibit, we need to separate them so that we all know that we're looking at separate documents. This is going to be very difficult for people looking at this transcript to figure out exactly where we were just now.

MS. WILLIAMS: I agree. These were copied on Tuesday and we didn't really have time to go through and --

HEARING OFFICER TIPSORD: That goes for everybody. Because, keep in mind, when

people are reading the transcripts and going back and looking it at this, and although it may be fresh in our minds today, it's going to be true of all of us, it would be real helpful if we can do that. So thank you. Sorry, Mr. Andes.

MR. ANDES: A couple of follow-up questions on previous testimony.

MR. HARLEY: I'm sorry. Before we leave, are we leaving the subject of bass in the Cal-Sag?

MR. ANDES: We're still going to be talking about fish.

MR. HARLEY: Could I ask a question specific to bass in the Cal-Sag?

MR. ANDES: Go ahead.

MR. HARLEY: Thank you. Are any of the agency witnesses aware of the fact that the National Bassmaster's Classic was -- tournament took place in the Calumet?

MR. SULSKI: Yes.

MR. HARLEY: And was that on or around July 2000?

MR. SULSKI: I don't remember the

exact date.

MR. HARLEY: Thank you.

MR. ANDES: Was that on the Cal-Sag Channel?

MR. SULSKI: It was the entire Calumet system.

MR. HARLEY: Then a follow-up. Do you know whether or not bass were caught during the Bassmaster's Classic that was undertaken in the Calumet?

MR. SULSKI: I don't know. I know that there was a weigh-in station at the Alsip or Worth boat dock. I don't know.

MR. ANDES: Do we know if they were small mouth instead of large mouth?

MR. SULSKI: I don't know.

MR. ANDES: Thank you. A follow-up question. On January 29 in the testimony of Mr. Sulski, Page 213, the statement was that a species like channel cat would have a DO requirement that would fit a certain sort of habitat. Can you explain exactly how the DO requirement would be related to certain sort of habitat?

MR. SULSKI: These were questions related to CDM's use of the word sport fish, it looks like. Please repeat your question. I just wanted to read the context.

MR. ANDES: Sure. So the statement was made that a species like channel cat would have a DO requirement that would fit a certain sort of habitat. So I'm trying to understand how their DO requirement is related to a certain sort of habitat.

MR. SULSKI: The use designation that we're proposing.

MR. ANDES: As a scientific matter, how does the DO requirement in terms of what they need to grow, not die, et cetera, how does that relate to a certain sort of habitat?

MR. SULSKI: I'm not sure how these got linked. So I would suggest that -- I don't know how to answer your question.

MR. ANDES: So there's no real basis for linking them, right?

MR. SMOGOR: For linking what?

MR. ANDES: DO requirement and a

certain sort of habitat.

MR. SMOGOR: I think if you're setting DO requirements for early life stages of fish, you make the assumption that those early life stages can be produced in those waters. I mean you're making those waters, you're relying on those waters to support those early life stages.

MR. ANDES: But the DO requirement of the species doesn't have anything to do with the habitat nature. That's all I'm saying. They're two separate issues.

MR. SMOGOR: Their physiological requirements?

MR. ANDES: Yes.

MR. SMOGOR: No.

MR. ANDES: Thank you. Let's move to the March 10 morning testimony by Mr. Smogor, and this will be on Pages 74 and 75 of that testimony.

MS. WILLIAMS: Just a second.

MR. ANDES: We're going to be talking about fish sizes, if that helps.

MR. SULSKI: We found the pages.

MR. ANDES: The statement here was based on the small sizes of some of the individuals captured, one could deduce that there must be some kind of spawning going on in those waters because of the small sizes of fish present, usually small sizes compared to the adult size of species. So the first question is are there specific criteria or length/width ratios which are used for various species to characterize small fish as subadults?

MR. SMOGOR: I don't know of specifics.

MR. ANDES: So what methodology was used to decide whether a small fish was simply small versus a young fish?

MR. SMOGOR: In other words, you're asking is it possible that the small sizes I referred to could have been adult reproductive fish?

MR. ANDES: Yes. How did you decide whether smaller fish were subadults or not?

MR. SMOGOR: I was basing it on my personal experience with sampling fishes and

capturing fishes.

MR. ANDES: Do you know of specific protocols that are normally used to analyze fish data and determine which individuals are likely to be subadult?

MR. SMOGOR: Not offhand. I haven't applied those, no, not in this situation.

MR. ANDES: Okay. Has IEPA indicated on the fish data spreadsheets which individuals they decided were subadult and how many of them were there?

MR. SMOGOR: No. We haven't identified that specifically.

MR. ANDES: There is no way for us to go back and check in terms of which ones you thought were subadult?

MR. SMOGOR: I was given some general observations of these sheets. If you're looking for potential examples I can try to look through them now and point out what I believe are probably subadult fish sizes.

MR. ANDES: No. I'm interested in the record. I'm interested in what the Agency considered in deciding -- in making its

determination.

MR. SMOGOR: My testimony that you're referring to on the record was based on my general knowledge and based on my review of these sheets, but not based on any kind of formal analysis.

MR. ANDES: Okay. And I'm done with DO and related issues. I have other issues on bacteria and on other pollutants, but I wanted to stop there and let you know that.

HEARING OFFICER TIPSORD: Okay. Well, then let's go ahead and break for lunch now.

(Off the record.)

(Lunch break taken.)

HEARING OFFICER TIPSORD: Mr. Andes?

MR. ANDES: I'll move to prefiled questions for Mr. Twait, and I believe these are on Page 31 of our prefiled questions. The second question, on Page 2 of your prefiled testimony you state in most cases identical numeric or quality standards are necessary to protect all of the proposed aquatic life use designations. Exceptions to this are temperature, dissolved oxygen, and

ammonia.

First, if you based the specific numeric standards on species known to exist in the CAWS, can you identify the parameters for which this was done?

MR. TWAIT: The Agency looked at the potential of the waterway, not necessarily at species known to exist. However, for some of the toxics, and by toxics I mean metals that we relied on the National Criteria Document, we removed the cold water species and species not native to Illinois in the development of the proposed standards.

MR. ANDES: Can you say which parameters that applied to?

MR. TWAIT: I can say they do -- that does apply to copper, and I know it applies to some of the other general -- some of the other parameters where we took the water quality standard from general use, but I don't know off the bat, off the top of my head, which ones those are.

MR. ANDES: Okay. Well, I would like to request a list of those parameters.

MS. WILLIAMS: I think that we had testimony on this already, Fred, at the last hearing, and I think he did provide more specific -- I mean I can go back to the transcript, too, and find it if that will be sufficient for your question.

MR. ANDES: I don't remember this specific question being answered.

So there was some pollutants for which you removed the cold water species and species not known to exist in Illinois. And what was the rationale for doing that for some and not other pollutants?

MR. TWAIT: We did that wherever the national criteria documents would have been using the cold water species as -- in the national criteria document. If it -- we would have removed cold water species wherever practical from our water quality standards.

MR. ANDES: Okay. And from what you're saying it sounds like it was not any attempt to differentiate between species known to exist in Illinois and species known

to exist in the CAWS?

MR. TWAIT: For the proposal we had not done that specifically. And part of the reason is the way that the National Criteria Document works, the development of the standards works, is that if you remove too many species, the criteria get more protective because you're taking out -- you're taking out -- you're increasing your multiplier because your species are going down.

MR. ANDES: Okay. Let me move to Question D. And this really relates to Question E as well. Why is it that temperature, DO, and ammonia there are different standards for the different aquatic life uses but not for the other parameters?

MR. TWAIT: Because the National Criteria Document treated those -- well, the National Criteria Document treats some parameters separately such as dissolved oxygen. The National Criteria Document talks about when you have sensitive life species present or absent. It talks about suboptimal

growth. Ammonia does something similar. It talks about when you have sensitive life species present or absent. And temperature --

MR. ETTINGER: You've been saying sensitive life species. I think you mean stages.

MR. TWAIT: Early life stages. I'm sorry. Thank you. And for temperature we've developed an RAS list. For the toxics, the National Criteria Document does not go into whether or not there's early life stages present or absent, and it does not make some of those differentiations.

MR. ANDES: But if we have waters where we believe that they cannot attain the Clean Water Act uses, wouldn't it make sense to consider whether the standards for variety of pollutants should be different for those waters?

MR. TWAIT: Yes. I think where we could do that we did, and one example would be cadmium where the National Criteria Document, when we looked at it with the water

quality standard would be and we compared it to what was in the water, we went back and looked to the sufficiency of our general use and --

MR. ANDES: I'm looking more for distinctions between, say, A waters and B waters, and wouldn't it make sense to have different standards for those two kinds of waters if the biological potential of those waters are different?

MR. TWAIT: Well, the major difference between the A and B waters is whether early life stages are present or absent, and the metals do not differentiate between presence or absence of early life stages.

MR. ANDES: That may be the difference in how you did the standards. The difference in uses, as I recall from testimony earlier today from Mr. Smogor, was that the Category B waters have incrementally lower biological potential. So my question is if they have incrementally lower biological water potential, why aren't the standards for copper or other pollutants different as they

are for DO, ammonia, and temperature?

MR. TWAIT: Well, I think if you have early life stages present, it's incrementally better than if you have a spot where there's no early life stages. So I think that there is some -- it is incrementally better and part of that is whether the early life stages can be supported or not.

MR. ANDES: But the Agency's proposal makes the Use B waters meet the same copper standard as the Use A waters. So my question is why do that if the early life stages are not present? Or, you know, if those Use B waters don't have the same biologic potential, is it right to make them meet the standard that the Use A waters need to meet?

MR. TWAIT: Well, the standard is based on toxicology information, and they don't differentiate between when you have early life stages present or absent.

MR. ANDES: The EPA numbers are guidance, correct?

MR. TWAIT: Yes.

MR. ANDES: Let me move on to another

question.

MR. ETTINGER: Let me follow up on that. Are you aware of any situation in which you are using a criteria to protect, that was designed to protect the species which isn't present in the B waters.

MR. TWAIT: Could you restate that?

MR. ETTINGER: Are you aware of any situation in which you are using a criteria in the B waters as to adult fish that is not necessary to protect adult fish which are in those waters?

MS. WILLIAMS: And by situation, do you mean parameter?

MR. ETTINGER: As to any pollutant. As to any fish.

MR. TWAIT: I don't think we've included any parameters that are not necessary. Some of the parameters in the species list, they could have a species in there that will not be found in the Use B waters.

MR. ANDES: Okay.

MR. ETTINGER: Do you know of any such

fish now?

MR. TWAIT: Off the top of my head, I'd have to say no.

HEARING OFFICER TIPSORD: Mr. Andes?

MR. ANDES: Next question. On Page 3 of your prefiled testimony you state that there are a number of water quality standards where the most recent U.S. EPA National Criteria Document was found to be the same as or consistent with the current water quality standard on the books for the general use designation. Given that the CAWS are not general use waters and do not support biotic indices as high as found in general use waters, do you expect that these standards are more protective as is necessary for, for example, you say Use B waters?

MR. ETTINGER: I object to the question. There's a suggestion in the question that every general use water in Illinois is of high quality. We've got some whopping bad general use waters around this state. I just want to make sure that his question doesn't imply to every general use

water in the state is of high quality.

HEARING OFFICER TIPSORD: I don't know that I would interpret that, but your point is taken.

MR. HARLEY: I also would object on the basis that we heard testimony earlier today that there are portions of the CAWS that are now designated as general use waters.

MR. TWAIT: It's -- it's possible that some of the numeric standards are more protective than they need to be. It would seem logical that if you were protecting for a lower use water quality standards would be less stringent than you would protect for higher use. However, as I mentioned before, the way the standards are set, you have the -- when you take out too many species, the standard becomes more stringent. And I also mentioned that -- and this was definitely the case for Cadmium. And, as I mentioned before, we removed the cold water species and species not native to Illinois.

MS. FRANZETTI: Mr. Twait, is the

reason, if you could just explain a little bit, is the reason that when you get down to a certain smaller number of species the standard starts to get -- or the value that is calculated for the proposed standard gets stricter is because of some sort of higher multiplier is used? Can you just explain why that happens when you reduce the number of species you're working with?

MR. TWAIT: As I understand it, part of it is the multiplier goes up and part of it is because the standard deviation increases.

MS. FRANZETTI: Is that -- Is the underlying intent of that the assumption that if you only have a certain number of species there must be a greater degree of uncertainty with respect to what you're trying to protect by the proposed standard? I'm really asking do you know what the underlying logic is?

MR. TWAIT: I don't know what the underlying logic -- I mean that sounds reasonable.

MS. FRANZETTI: And I'm just going in

the direction of in a case like this where you do know that, in fact, a limited number of species can exist in a water body like the CAWS, is there flexibility built into the guidance that you're using that would allow you to adjust so that you don't get that result when you're using a limited number species?

MR. TWAIT: I could not, when I was dealing with cadmium specifically, could not find any type of wiggle room for any way to get around that that was supportable.

MS. FRANZETTI: Thank you.

HEARING OFFICER TIPSORD: Mr. Andes?

MR. ANDES: We may come back to that issue a bit, but let me move on to the next question on No. 4. On Page 4 you state that the federal criterion states that a pH range of 6.0 to 6.5 will be unlikely to be harmful to fish unless the free carbon dioxide present is in excess of 100 parts per million. The question is why does the IEPA choose the proposed standards of 6.5 to 9.0 instead of requiring pH of 6.0 to 9.0 and

free carbon dioxide less than 100 ppm which should be acceptable under the federal criteria?

MR. TWAIT: Well, the way that you rephrased it from 6 to 9 and free carbon less than 100 parts per million isn't a good way to capture what the federal criteria would say. You've got a valid point. From 6.5 to 9 the federal criteria says that those pH levels are good. When the pH is between 6 and 6.5, it's only good when the carbon -- it's only protective when the carbon dioxide is less than 100 parts per million.

MR. ANDES: So does that say that perhaps the standard could be rephrased? Sounds like the issue is specifically that range, the 6.0 to 6.5. And I think what we're saying is why not, in some way, say in the standard that pH range in that range will be allowed if the carbon dioxide is not over 100 ppm? So the question is would the Agency consider that change given that that would be allowed by the federal guidance?

MR. TWAIT: I think it is a very

valuable or very valid point that we could do that. We didn't because actually I didn't think of it. So I think we can definitely go back and take a look at that because that's what the federal criteria would allow.

MR. ANDES: Thank you. I'll move on to Question 6. And, actually, I'm going to directly to 6A. It's a specific question concerning dissolved cadmium. In light of the fact that the proposed hardness-based chronic standard equation for dissolved cadmium often results in a concentration very close to the method detection limit, are the compliance data for this constituent reliable? Or would the Agency consider addressing this issue?

MR. TWAIT: Well, with the hardness value of something that we're going to find in the CAWS waterways somewhere around 205 or so, the water quality standard is 0.002 milligrams per liter which is two micrograms per liter. And you're talking about a method detection level of .3 micrograms per liter. So I'm not certain that it's all that close.

Had we gone with the National Criteria Document, this would be a much -- then the relationship between the method detection level and the water quality standard or the National Criteria Document would be very close, but I don't think they're very close for what we've proposed.

MR. ANDES: So let me clarify. So what is the number you're thinking comes out of the equation and for which segment are you talking about?

MR. TWAIT: I plugged into our equation a hardness of 205 and I got 0.002 micrograms per liter -- milligrams per liter which is two micrograms per liter.

MR. ANDES: And that hardness value is from?

MR. TWAIT: That hardness values is what we consider the critical hardness value, and I believe that came from the lower Des Plaines River.

MR. ANDES: Did you consider -- One, I'd like to see the source of the data, the next question.

MS. WILLIAMS: Source of what data? Because I think that might be in the record. Are you talking about hardness data?

MR. ANDES: Right.

MS. WILLIAMS: I do believe we have hardness data in the record. Does that sound right or no?

MR. ANDES: Probably not for the lower Des Plaines from the District. I'd just like to know.

MS. WILLIAMS: Maybe I was jumping ahead as far as what I thought you were interested in doing with the data. I'm sorry.

MR. ANDES: The first question is I'd like to get the source of the 205, and then where did that come from; if it's in the record, great. I'd just like to know where. And then the second question is was there other data for the CAWS and what would these numbers come out like for the CAWS?

MR. TWAIT: The critical hardness data that I mentioned, I just took a -- we use a critical hardness data when we suggest permit

limits in an MPDES permit. And the critical hardness data is developed by taking the 10 percentile low flows and take the 10 percentile hardness during those low flows. And for the station that we have in Joliet for the lower Des Plaines River is 205. I believe the hardness values for the CAWS, I think everything was above 100.

MR. ANDES: That critical hardness calculation is what you use in calculating permit limits?

MR. TWAIT: Yes. That's the hardness value that I used. Although when you take samples, you would use the hardness value of your individual sample.

MR. ANDES: And when assessing whether the water has attained the standards or not, you would tend to use the actual data?

MR. TWAIT: Yes.

MR. ANDES: I'm sorry for the delay. So this was the critical hardness information using that formula for the lower Des Plaines, and as to the CAWS --

MS. WILLIAMS: Can you say what

formula? You said that.

MR. ANDES: I'm sorry. The formula that Mr. Twait just described was used with data from the lower Des Plaines to get the 205 number that he used in his calculation, correct?

MR. TWAIT: Yes. Although I shouldn't have mentioned that it was the critical hardness data. Basically what -- I used the number, the hardness value of 205 in the water quality standard to develop a water quality standard for cadmium. It doesn't really matter where I got the 205 other than the fact that that's one of the relative numbers in the receiving.

MR. ANDES: I'm just trying to figure out what exactly is the standard going to be that we have to figure out here can it be attained. And the next step is what permit limits will it be based on. But in the first place I'm trying to understand if we're talking about a standard, a standard, not a permit limit but a standard that could be, depending on the hardness data, in the way

you use the hardness data, very close to the method detection limit.

MR. ETTINGER: What's the lowest hardness we're finding in the CAWS?

MR. TWAIT: I believe when we looked at it it was 100.

MR. ETTINGER: Okay. Would it be a big job to figure out what your cadmium standard would come out to if you used 100 hardness?

MR. TWAIT: It will take me a few minutes.

MR. ETTINGER: Maybe we can do that at a break or something, and then we'll get an idea as to the worst case scenario. Would you be okay with that?

MR. ANDES: Obviously we've done calculations that indicate the numbers are pretty low, so I'm not offering evidence here, so.

MR. ETTINGER: You can offer a hypothetical based on hardness being a hybrid and let's hear what the number is.

MR. ANDES: Jennifer Wassick (ph.) For

the District.

MS. WASSICK: So we calculated for cadmium and found some levels that are within either exactly the method detection limit or within .00011.

MR. POLLS: What was the hardness value?

MS. WASSICK: We used the actual hardness value that was measured in the water.

MR. POLLS: What was it?

MS. WASSICK: What was it?

HEARING OFFICER TIPSORD: Here is what we need you to do, unless we're going to swear you in right now. We need you to tell us what was the highest hardness level you used, and say I used -- sorry -- the lowest, and I used that number and plugged it into the formula. Does this sound like the correct total.

MS. WASSICK: For instance, we have some north shore channel data central stream in 2005 for the hardness was about 140 and the cadmium was .004. So that concentration

would be in violation of the standard.

MS. WILLIAMS: Can we be sure and be clear about which formula you plugged that into?

MS. WASSICK: Sure. It's the proposed standard for dissolved cadmium for the --

MR. TWAIT: Could you read the number, the equation?

HEARING OFFICER TIPSORD: You know what, we need to swear you in. We're getting too many facts in here not to swear you in.

(Witness sworn.)

HEARING OFFICER TIPSORD: Go ahead.

MS. WASSICK: So you want me to read the equation?

MR. TWAIT: Or the -- just the A value and the B value.

MS. WASSICK: So this would be, I don't have a page number, but this would be from the proposed standards and the table for the American Water Quality Standards For the Protection of Aquatic Organisms.

HEARING OFFICER TIPSORD: Excuse me. Off the record for a second.

(Off the record.)

MS. WASSICK: We can provide these eventually for the record, but I would just say we have done the calculations for what these standard would be based on, these equations that were proposed, and then we've compared them to what our values would be based on our hardness and cadmium data and we've identified several that are very close to the method detection limits. So we will provide that eventually, but.

MS. WILLIAMS: We were just concerned, make sure that you're using the right formula. Because those numbers sound very low to us, but we can do that after.

MR. ETTINGER: Could I request that -- Is there any number we need other than their cadmium number and the hardness number to run your formula?

MR. TWAIT: No.

MR. ETTINGER: We just request what the cadmium number is, the hardness number that you had, and Mr. Twait can run it through you his formula and see what number

he comes up with.

MS. WASSICK: This was apparently also provided to IEPA with a letter. So I don't know. It could be part of the record. I'm not sure.

MR. TWAIT: Well, this is my concern. There was some data provided by the District and they were comparing their samples from April 2005 to November 2006, and they were giving the hardness value, zinc, cadmium and nickel; and then the chronic standards soluble for zinc, cadmium, nickel, and those numbers were based on the National Criteria Document that we had originally proposed. After receiving this data, we went back and looked at the screen data, and that's when we decided to use the current general use standard. So it had changed from the day that the District had provided their data.

MS. WILLIAMS: And that's Exhibit, Attachment BB to the statement of reasons has that submittal from MWRD in it?

MR. ANDES: Let me clarify something now. The issue in this question was not

whether the concentrations are over the limit or over the standard. The issue was whether the concentrations are close to the measured detection number which wouldn't change, which would not change depending on where the Agency standard is. The issue is an analytical one in terms of whether if we're --

MR. TWAIT: But I believe it would depend.

MR. ANDES: You're saying your numbers are going to be much higher than that because of the change in the proposal.

MR. TWAIT: Exactly. So I don't think our proposed numbers are close to the method detection level. And I will throw together some numbers during our break.

MR. ANDES: Thank you. I'll continue.

The next question, and I believe this was No. 7. On Page 9 of your prefiled testimony you state that there is currently no chloride standard applicable to the secondary contact and indigenous aquatic life uses segment of the CAWS and lower Des

Plaines River. Proposed chloride water quality standard is exactly the same as a current general use water quality standard of 500 milligrams per liter. The general use chloride standard has not been updated since the original adoption. U.S. EPA's National Criteria Document recommended a criterion maximum concentration of 860 milligrams per liter and a criterion chronic concentration of 230 milligrams per liter. Given that you indicate that the federal criterion allows a maximum concentration of 860 milligrams per liter and given the highly urban environment and limited aquatic habitat found in the CAWS, my question is what's the rationale for setting the CAWS standard at 500 which is over 40 percent lower than the current federal criterion?

MR. TWAIT: This was partially based on the work that is ongoing for the sulfate rulemaking. The proposed sulfate water quality standard is based on a maximum chloride limit of 500. The Agency believes that this value of 500 is basically

equivalent to the national criteria since it's a one-number standard between acute and chronic numbers of 860 and 230.

MR. ETTINGER: 860 is an acute number, 230 is a chronic number, so doesn't that make a difference in the way when we write permits to gauge compliance.

MR. TWAIT: It does. The chronic number is a not to exceed ever, and -- or the acute standard is not to exceed, the chronic standard can be met by an average. The acute standard has to have -- You can only have mixing in a zone of initial dilution, and the chronic standard can use the entire mixing zone with a one number standard we allow that to use the entire mixing zone.

MR. POLLS: How many samples do we need to determine if the chronic is complied?

MR. TWAIT: I think one value above not to exceed limit would be a violation.

MR. POLLS: I thought the acute was always one sample instantaneously, the chronic is four samples. How does Illinois -- How do you know if you're in

compliance with the chronic? Is it one single sample?

MR. TWAIT: For this we're not proposing a chronic, but for a chronic standard it would be based on four consecutive samples that are representative of the time period that you're taking.

MR. ANDES: If you're not proposing chronic, but the federal acute is 860, explain to me again why -- I understand that -- I understood the sulfate issue, although we can come back to that. But I want to understand again if the 500 is something that's going to be tested on a one-time basis and the federal number is 860, why the 500 instead of the 860 if we're not doing chronic.

MR. TWAIT: Well, with the national criteria document, if you want to adopt the 860, I believe the 230 as a chronic standard comes with it.

MR. ANDES: Can you cite me to where they demanded that you have to do both? Is there support for saying, well, we can only

do the 500 and substitutes for both of them, but if we had the 860 we have to do the 230 as well?

MR. TWAIT: I'm not sure of the answer. I'm not quite sure I can answer that, but my understanding is -- well, I'll just say I don't know.

MR. ANDES: Okay. On the -- Let me go back for a second to just to clarify one thing. On the cadmium issue we've brought information showing that the concern we had exists with regard to the proposed standards, not only the standards that were suggested earlier. So we'll provide that information. I think that's been provided to the Agency before, but we'll -- we will -- it has not? We will provide that.

Next question, No. 11, the seasonal ammonia standard is for the period of March through October, while the enhanced seasonal DO standard is March through July. If both are supposed to be protective of early life stages, why do they not have the same time period?

MS. WILLIAMS: What number did you say, Fred? I'm sorry.

MR. ANDES: Eleven.

MR. TWAIT: I don't know that I can answer that specific question. The general use rulemaking for ammonia and dissolved oxygen are both on the record, they're both available on the Board's web page. The decision about why those particular months would apply separately --

MS. WILLIAMS: I mean I don't know -- I hate to answer this question, because it's technical, but I was involved in both and there were very specific factors brought out in both about why different seasons were appropriate. And there's support in the different criteria documents for different levels of protection that -- Roy may be able to explain the DO a little bit better why we came up with that number. And also from a practical standpoint the critical periods were different as well, but.

HEARING OFFICER TIPSORD: Can you tell me, Miss Williams, if that was delineated in

the Board's opinions --

MS. WILLIAMS oh, absolutely, in each one. In ammonia opinion which, I don't know, is that 2002? I think the ammonia opinion was from 2002 and then, of course, the DO opinion is only a couple months old.

MR. ANDES: I'm trying to understand the difference.

MS. WILLIAMS: And I guess I'm just trying to explain it's complicated, and I'm not sure --

MR. ANDES: That doesn't mean we don't get an explanation.

MS. WILLIAMS: I think I answered your question.

MR. ANDES: I didn't hear the explanation.

MEMBER RAO: I recall in one of the hearings in DO there was extensive discussion about the early life stages between ammonia and DO, because the same question was asked. And if you go back, you will hopefully find those cites and maybe you can provide it.

MR. ANDES: That would be helpful.

MS. WILLIAMS: The District was at that hearing, too, right, Mr. Rao?

MEMBER RAO: Yes.

HEARING OFFICER TIPSORD: But in fairness, Mrs. Williams, this is a different rulemaking, and it's a prefiled question. So we really need to --

MS. WILLIAMS: Absolutely, absolutely. We will submit citations to the rulemakings. I think Mr. Rao is right. We can just use DO to kind of explain both.

HEARING OFFICER TIPSORD: And if it's transcripts, you need to provide pages of the transcripts.

MS. WILLIAMS: Absolutely.

HEARING OFFICER TIPSORD: Thank you.

MR. ANDES: The next question, No. 12, and I'll rephrase it a bit. If there are excursions from the mercury standards and sources other than wastewater discharges are the likely cause for that, how does the Agency expect to deal with that issue?

MR. SULSKI: We will continue with our programs of fish flesh analysis and

consumption advisories. We have missions reductions programs, TMDLs may be necessary. We will continue with our programs of nonpoint source pollution control BMPs, household hazardous waste collection programs, mercury thermometer exchange programs, a list of a few of the -- of our intentions.

MR. ANDES: I guess the scenario is if there are seepages (sic.) in the water body on mercury, and because a lot of sources use that water and then recirculate it and put it back in, their discharges will also end up with violations on mercury even if they haven't actually contributed any mercury. How would the Agency deal with those issues?

MR. TWAIT: Well, for those issues where they're withdrawing water and not adding mercury and trying to discharge, then there are -- I believe it was 304-103. Let me make sure of that. That deals with background concentration. Yes. It's 304.103 that deals with background concentrations when you're withdrawing water from a water

body and discharging it back to the same water body without adding the constituent to it.

MR. ANDES: Okay. I believe I'm done with our questions on those issues, and I have a few left on recreation and bacteria issues. These are follow-up questions.

MS. WILLIAMS: Are you done with the prefiled and you want to ask follow-up?

MR. ANDES: I believe I am. I'm done with the prefiled questions.

On recreation and disinfection, if the Agency, and I'm paraphrasing earlier testimony, does not know exactly the extent to which disinfection will reduce risk to recreators, how will the Agency measure the effectiveness of disinfection in addressing water quality issues and attainment of the recreational uses?

MR. TWAIT: I think to measure the effectiveness it would be to compare bacteria measurements that are prechlorination versus postchlorination in the receiving stream and

try to pick out days that CSOs were not happening to make that type of comparison.

MR. SULSKI: It's a two-prong question, if I understand you, and correct me if I don't. The effectiveness of disinfection will be gauged at the effluent. So there will be a permit limit and there will be monitoring at the effluent. The effectiveness in the waterway, we're not proposing a water quality standard, so it's hard.

MR. ANDES: So the real issue is --

MR. SULSKI: You don't have a standard.

MR. ANDES: So the question is other than reducing bacteria levels in the discharge, has the Agency assessed and how will the Agency assess whether that disinfection actually translates into water quality that effectively is protective given all the other sources?

MR. ESSIG: We would not assess at this point, since there's no water quality standard assessment in terms of the

integrated report.

HEARING OFFICER TIPSORD: Mr. Harley?

MR. HARLEY: Just to clarify before you go on. Mr. Twait, you said that you would assess impacts pre and postchlorination. Isn't it correct that the Agency's regulatory proposal does not mandate chlorination, it mandates disinfection?

MR. TWAIT: That's correct. I guess what I should have said is if you want to measure the effectiveness of chlorination on the receiving stream, the way to do it would be -- I'm sorry -- disinfection. I'm way too tired. Would be to measure the receiving stream before and after chlorination -- disinfection. I'm sorry.

MR. HARLEY: But under the Agency's proposal, the regulated entity would have the option to choose the method of disinfection so long as it met the numeric limit; is that correct?

MR. TWAIT: Absolutely.

MR. HARLEY: Thank you.

HEARING OFFICER TIPSORD: Mr. Andes?

MR. ANDES: Thank you. Let's go to testimony on disinfection issues. Particularly on January 29, Mr. Sulski talked about recreational activities that occur and that the Agency has to protect. And it's on pages 223, 224, and particularly discusses the Agency's responsibility to protect water quality versus physical safety.

And the first question I had is it correct to say that the Agency views its responsibility as ensuring water quality that protects recreational uses but does not concern itself with physical safety to the recreational users?

MR. SULSKI: We're not a physical safety agency.

MR. ANDES: Who is?

MR. SULSKI: The Chicago Police Marine Unit, the U.S. Army Corps of Engineers slash Coast Guard, I'm not sure which branch is involved there.

MR. ANDES: And has the Agency discussed these issues with those agencies to talk about possible physical safety risks

from increased recreational uses of these water bodies?

MR. SULSKI: We discussed the proposed recreational uses with those agencies to see the intent of the meeting, and it is -- the minutes of the meeting are included. We discussed whether any of our intentions in the proposal interfered with any regulatory responsibilities of theirs.

MR. ANDES: And that was one meeting?

MR. SULSKI: Yes.

MR. ANDES: And that was a number of years ago?

MR. SULSKI: Yes.

MR. ANDES: Do you remember -- I know it's in the record. I just don't remember exactly when it was.

MR. SULSKI: It was in the 2003/2004 time frame.

MR. ANDES: Okay. Now, it is accurate to say that one of the factors that the Agency is required to consider in doing UAA are physical factors, correct?

MR. SULSKI: Correct.

MR. ANDES: I'm just thinking of whether I have anything to follow up beyond that.

Since that meeting, there have been some changes in the proposed uses. Am I right?

MR. SULSKI: Since that meeting?

MR. ANDES: Since that meeting with the other agencies, the proposed standards came out and reflect some different use designations than were being discussed at that point. Some areas were changed from nonrecreation to incidental contact, I believe.

MR. SULSKI: Correct.

MS. WILLIAMS: But we didn't have that at the time, did we?

MR. SULSKI: No. The question is did they change since we had those meetings. And the answer is yes, there were some changes in the use -- recreational use designation.

MR. ANDES: And there have been no further meetings since then?

MR. SULSKI: No.

MR. ANDES: I believe we're done.

HEARING OFFICER TIPSORD: Thank you very much. Mr. Safley for ExxonMobil?

MR. SAFLEY: Yes, ma'am. As I stated yesterday, the majority of our questions have been asked and answered. We have seven or eight that are left.

MS. DIERS: ExxonMobil.

MR. SAFLEY: Tom Safley on behalf of ExxonMobil. Once the Agency gets a chance to pull out the documents, I'll direct you to the questions.

The first question that we had not had a chance to ask is on Page 5, Roman Numeral II, C2 is the question. Per the Aqua Nova UAA, it should say, the lower Des Plaines River continues to be a highly modified water body that does not resemble its pre-urbanized state. Furthermore, the UAA stated that while there were improvements it could 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 or unimpacted waters in the

foreseeable future. Since this contradicts the findings of the later Yoder report used for the Agency's proposal, what findings have required the Agency to propose water quality standards more stringent than the State's current general use requirements for this water body?

HEARING OFFICER TIPSORD: And just for purposes of the record, we're now talking about Attachment A the UAA on the lower Des Plaines?

MR. SAFLEY: Yes.

HEARING OFFICER TIPSORD: And the Yoder report you were referencing is?

MS. WILLIAMS: Can you hang on a second, Tom?

MR. SAFLEY: Sure, of course.

MS. WILLIAMS: I think there's something in your question that --

MS. DIERS: I believe it's Exhibit 15. Is that what you've concluded?

MR. SAFLEY: I'm sorry. I don't have that.

HEARING OFFICER TIPSORD: It was

attached to his testimony, right.

MR. SAFLEY: Yes.

HEARING OFFICER TIPSORD: Yes, it's Exhibit 15 or 16. I'll find out.

MR. ETTINGER: I just want to object to the presumption in the question that the standards proposed are necessarily more stringent than the general use standards.

MS. DIERS: I believe it's 15.

HEARING OFFICER TIPSORD: Well, actually, the question is -- Let me just clarify so I'm sure I get what you're objecting to, Albert.

MR. ETTINGER: It says given that the --

MR. SAFLEY: And to respond to the objection, it's my understanding from the testimony in the rulemaking that there are at least some standards that are proposed, temperature and some other standards that are based on national -- on U.S. EPA guidance that are more stringent than the current general use standards, for example.

MR. ETTINGER: And there are some that

are less.

MR. SAFLEY: Understood. And I'm focussing on -- The question should have been rephrased. I'm focussing on those where the standard being proposed by the Agency is more stringent than general use.

MR. SULSKI: I would need some -- We need some clarification. Because when you say highly modified water body, if you could tell us where that says that. Because we need to find out what context that you mentioned that. Because when we're talking about the lower Des Plaines, we have two distinct water bodies that are -- that there's a great disparity between.

MR. SAFLEY: Sure. And the references I have for that first sentence are Pages 1-4 and 1-16 of the Aqua Nova UAA.

MR. SULSKI: And the other statement, your question, it did not find the lower Des Plaines River to be capable full attainment of aquatic life and the recreational goals of the Clean Water Act for unimpacted waters in the foreseeable future, you need to know

where you're getting that from. Because, again, there's two reaches here in the lower Des Plaines and there are different statements and conclusions that apply to each.

MR. SAFLEY: I think in response, Mr. Sulski, to your request for citations on that second sentence, the easiest place to look is Chapter 9, Pages 9-1 and 9-2. And certainly I understand your point that there's a different discussion there with the between the Brendan Pool and the Dresden Island Pool, and the question may have not sufficiently differentiated.

MS. WILLIAMS: Are you interested in both pools, Tom, or are you asking about one pool or the other? Maybe that will help us answer.

MR. SAFLEY: Let me try to get around this issue and attack this in a different way, by starting with this question: In evaluating the lower Des Plaines, and the Agency can separate the answer by pool if that makes it easier, did the Agency rely on

both the Aqua Nova findings and the findings of Chris Yoder?

MR. SULSKI: Yes.

MR. SAFLEY: Okay. Does that answer apply to both pools or to one or the other?

MR. ESSIG: I'm sorry. What was your last question?

MR. SAFLEY: When responding yes to that question, the Agency relied on both Aqua Nova's findings and the findings of Chris Yoder. Does that answer apply to the entire lower Des Plaines or is that answer confined to only a portion, just to clarify since we've raised this issue.

MR. TWAIT: Chris's report, the thermal portion of that provided options for the temperature water quality standard and not specifically for a designated use.

MR. SAFLEY: Right.

MR. SMOGOR: Are you referring also to the other Yoder report that addresses --

MS. WILLIAMS: What other Yoder report?

MR. SMOGOR: I'm sorry. It's not a

Yoder report. You're right. It's an MBI report. I guess we're not clear when you say the Yoder information what information you're receiving.

HEARING OFFICER TIPSORD: I think he's referring to Exhibit 16 which was attachment to the testimony by Mr. Yoder, and that was in response Mr. Twait gave --

MR. SAFLEY: It looks like we're both waiting on the other.

MR. TWAIT: I'm sorry. Can you just ask your question in a --

MR. SAFLEY: Sure. And now that we've clarified which Yoder report we're talking about, I'm giving Albert some credit here, at least. Did the Agency rely on that Exhibit 16 as well as the Aqua Nova findings in evaluating the entire portion of the lower Des Plaines River that is at issue in this rulemaking?

MS. WILLIAMS: I'd like to clarify exhibit numbers real quick again, because I think it will help. Exhibit 15 and Exhibit 16. Exhibit 15 is Mr. Yoder's

temperature report specific to the lower Des Plaines River, while Exhibit 16 is the report for SANCO (ph.) that he relied on developing Exhibit 16. But we're assuming we're talking about the Yoder report which is Exhibit 15.

HEARING OFFICER TIPSORD: Sorry. My fault.

MR. TWAIT: And the Agency did rely on that report for Branden Pool and Upper Dresden Island Pool, and the Agency relied on the data of the UAA report that was done by Aqua Nova.

MR. SAFLEY: Does the Agency consider the findings of those two different sources to be consistent regarding their conclusions on the conditions of those waters?

MR. TWAIT: The thermal report, as I mentioned, did not give -- It gave temperature options for those systems, and the options ranged from consistent with Clean Water Act, what he considered general use with 47 species all the way down to eight species, but those were options provided in that report. And he did not -- Mr. Yoder did

not make a recommendation as to which numbers to use.

MR. SAFLEY: Okay. And I think what I should do is direct the Agency's attention to Page 22 of the statement of reasons. This may be what's causing some of the confusion, and obviously we should have included the citation here in the question. But this is where the language that's included in these first two sentences comes from. The second -- The first full paragraph on Page 22 of the statement reads, it's the second sentence, it is clear from the UAA that the lower Des Plaines River continues to be a highly modified water body and does not resemble its pre-urbanized state. And then further on, the last sentence in that paragraph, while there has been improvement that 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 recreation goals of the Clean Water Act for unimpacted waters in the foreseeable future.

And I think what I'm picking up from your answers is that those statements -- and I guess this is what I want to ask: Does the Agency agree with those statements or should those statements have been qualified depending on what pool in the lower Des Plaines we're talking about? Maybe that's what's causing my confusion.

MS. WILLIAMS: Yes. Thank you.

MR. SAFLEY: So that's my question. Does the Agency agree with -- these statements appear to be directed to the entire lower Des Plaines. Is the Agency in agreement with that, or does the Agency feel those statements --

MS. WILLIAMS: No. And I think we've already discussed that this is a little confusing. If you want us to -- We should probably go through that again.

MR. SAFLEY: I don't recall.

MR. SMOGOR: We believe that the UAA has -- did conclude that the Clean Water Act aquatic life goal is attainable in the Upper Dresden Island Pool portion of the lower Des

Plaines River, and that's a clarification for this statement.

MR. SAFLEY: That obviously the prefiled questions were written before the testimony, and we hadn't linked that up, so let me skip to our next question. I think that clears up the confusion.

Our next question has not been asked. It's on Page 8 of our prefiled questions. It's Question No. 8. Given that the Aqua Nova's UAA proposed a quote modified use, closed quote, standard for the lower Des Plaines River due to its current use, why has the State's rulemaking proposal set general use water quality standards, and I would add or more stringent water quality standards, for each of the following constituents. And then there's a list there of ten or twelve constituents.

HEARING OFFICER TIPSORD: Which you need to read.

MR. SAFLEY: I'm happy to. I didn't know if I wanted to throw them all out there or go one by one or how the Agency wanted to

attack that.

MR. SMOGOR: Again, just to clarify, when you say that the Aqua Nova UAA proposed a, quote, modified use, unquote standard for lower Des Plaines River, we'd like to clarify that the UAA, even if they used those terms modified use, is not saying that aquatic life use at Clean Water Act levels cannot be attained in Upper Dresden Island Pool.

MR. SAFLEY: Okay. Well, let's just make the question a broader one then cutting off the first clause. What is the basis for the State proposing general use or stricter water quality standards for each of the following constituents? And we can start with arsenic.

MR. TWAIT: Well, I first would like to start off by saying that it was a management decision to adopt the most current criteria available and note that the majority of these current criteria can be met in a waterway currently.

MR. SAFLEY: If you can identify which of the ones on the list could be met

currently, please.

HEARING OFFICER TIPSORD: Before you do that, we need to read the list in. We never read the list in. We said arsenic. Now he's going to start giving a subset of a list that we don't have in the --

MR. SAFLEY: That's fine. The listing here is arsenic, cadmium, chromium, copper, cyanide, lead, mercury, nickel, total residual chlorine, zinc, benzene, ethyl benzene, toluene and xylene.

HEARING OFFICER TIPSORD: Thank you. Go ahead.

MR. TWAIT: The arsenic standard is not based on general use. It is based on the National Criteria Document which is more current than our existing general use standard. Cadmium is the same.

MS. WILLIAMS: I just want to clarify. You asked him -- We read the list in, but right before you asked him to identify which ones can be met, correct?

MR. SAFLEY: Yes.

MS. WILLIAMS: Is that more important

than him going through what's based on what?

HEARING OFFICER TIPSORD: I think we want both in the record.

MR. SAFLEY: Yes. So that's why I hadn't --

MR. TWAIT: I'll start out by saying that according to the UAA report, all of these can be met. Arsenic is based on the National Criteria Document, cadmium is the same as the general use, chromium is based on the National Criteria Document, copper is based on the National Criteria Document, cyanide is the same as general use, lead is the same as general use, mercury is the same as general use, mercury aquatic life is the same as general use -- Let me back up. Mercury aquatic life is based on the national criteria, mercury human health is based on the general use. The nickel is the same as general use, total residual chlorine is the same as general use, zinc is the same as the general use. And the four remaining -- well, benzene, ethyl benzene, toluene, and xylene are based on general use.

MS. WILLIAMS: Just to repeat, you think all of those standards are currently being met in these waters?

MR. TWAIT: According to the analysis by the UAA contractor, yes.

MR. SAFLEY: That's what I was going to next ask you about. On Page 2-32 of the Aqua Nova UAA, there is a Table 2.6, Parameters Meeting Illinois General Use Standards.

HEARING OFFICER TIPSORD: That's Attachment A.

MR. SAFLEY: And Federal Criteria. And I see some of those, these parameters here: Arsenic, cadmium, chromium, trivalent, cyanide, lead, nickel, and zinc. However, there's a discussion on the next couple of pages starting at 2-33 and 2-34 of parameters that do not meet the Illinois, at least the Illinois general use standards or threaten, it says. Included there are copper, mercury, and then I was having trouble locating information on total residual chlorine. So that's what I want to try to understand is

these pages from the Aqua Nova UAA, in light of your response that they're all in -- your understanding is they're all currently meeting the proposed standards?

MR. TWAIT: For the copper, in Appendix A2-34, Table 2.7, the District samples have a little note there that they measured total metals only and water quality standard is in dissolved. And if you flip back to Page 2-32 -- I don't see a list of where the Agency samples came off.

As this question relates to copper, I'll refer you to Page 72, our statement of reasons. In the lower Des Plaines UAA study, copper was identified as a parameter that did not meet the water quality standards at the locations on the lower Des Plaines River analyzed by the MWRDGC while the Illinois EPA location indicated compliance. Copper compliance was not found to be concerned in the CAWS. And the MWRDGC samples were based on total copper, whereas IEPA's samples were based on dissolved.

MR. SAFLEY: So the Agency felt that

it could rely on its dissolved copper samples and that based on that, copper was in compliance in the lower Des Plaines?

MR. TWAIT: That was the decision that was made.

MR. SAFLEY: What about mercury?

MS. WILLIAMS: Which one? Mercury human health or --

MR. SAFLEY: Maybe we have a difference in terminology between the Aqua Nova UAA and the Agency. But, again, at Table 2.7 on Page 2-34 Aqua Nova lists mercury as a parameter not meeting the Illinois general use standard or threatened.

MR. TWAIT: With regards to mercury, when I go back and look at this, MWRDGC data was once again total metals. However, I don't know that the Agency's -- wait a minute. For mercury I'll refer you to Attachment A, Page 2-34, and it's in his text. It's not a table, but he does list the reference site and five particular samples, four of them are MWRDGC sampling points, and for the acute standard, the compliance is 96

percent or above. And for the chronic, for the Agency samples, all the measurements were below the detection level and the compliance of the chronic standard was 95 percent and above for the district samples.

MR. SAFLEY: Does that mean that the Agency considers compliance of 95 percent or above to mean that the mercury standard is currently being met in the lower Des Plaines?

MR. TWAIT: I believe the Agency's decision was that that was not any worse than anywhere else in the rest.

MR. SAFLEY: What about total residual chlorine?

MR. TWAIT: I don't believe that total residual chlorine has been measured, although total residual chlorine disappears pretty rapidly from the environment meeting up with organic and pathogens and will be removed from the water. So it would be unlikely to measure total residual chlorine unless you were downstream of somebody that was discharging chlorine.

MR. SAFLEY: And I certainly can't

take issue with the chemistry of it. But your statement earlier that all of these parameters, your understanding was, were that the proposed standard were currently being met in the lower Des Plaines. I'm just trying to understand the basis of that statement with regard to total residual.

MR. TWAIT: The basis of that statement is that if you go out and measure chlorine, if you're not within somebody's mixing zone, chlorine will not persist in the receivings --

MR. SAFLEY: What about with regard to the betext (ph.) compounds?

MR. TWAIT: We do not take betext in the receiving stream, so I was mistaken on whether or not that would be in compliance simply because the Agency doesn't know.

MR. SAFLEY: So not that you know there's not compliance, the Agency just doesn't have any information that it is in compliance?

MR. TWAIT: Correct.

MR. SAFLEY: Okay. With regard to the

parameters other than the betext parameters where the Agency has concluded that the water body is in compliance, just to clarify, so I'm clear, what the Agency is saying is if the water body is in compliance with those parameters, the Agency feels that it's appropriate to propose either a general use standard that would protect that compliance or a more stringent standard, or I guess without regard to how stringent the standard that's from the latest national recreation; is that correct?

MR. TWAIT: The Agency made the decision that it was going to provide -- or to have the most current standard, and it really didn't matter whether it would be met or not.

MR. SAFLEY: That's what I was trying to understand was the nexus between whether or not the -- or if there is a nexus, between whether or not the parameter is in compliance currently and whether or not the Agency went with that current standard? And what you're saying is the compliance was not an issue?

MR. TWAIT: Not directly, because we were proposing water quality standards to protect the use.

MR. SAFLEY: Okay.

MR. TWAIT: And I'll preface that with cadmium, we did something a little bit different. We didn't adopt the National Criteria Document. We adopted the general use.

MR. SAFLEY: Okay. And with regard to -- when you say protection of use, I understand you to be saying the aquatic life use.

MR. TWAIT: Yes.

MR. SAFLEY: And so is it correct then to understand that the Agency concluded as to each of those parameters, either proposing general use or the national criteria, it was necessary to protect the use that the Agency concluded should be met in the lower Des Plaines River?

MR. TWAIT: Yes.

MR. SAFLEY: Going on to our question, next Question 9, on what did the Agency rely

on deciding to propose general use water quality standards for chlorides, iron, selenium, and sulfates?

MS. WILLIAMS: We agree that we've talked in detail about chlorides already?

MR. SAFLEY: That's fine.

MR. TWAIT: I'll quickly go ahead and say chlorides and sulfates were proposed rather than the existing total dissolved solids. The iron standard is for general, the current iron standard is less stringent -- the current -- I'm sorry. The current iron standard is becoming less stringent with the proposal and the selenium water quality standard is not changing from the existing use.

MR. SAFLEY: Okay. So selenium is not -- the selenium standard is not going to change from the current secondary contact selenium standard to the Agency's new proposed selenium standard?

MR. TWAIT: They are the same.

MR. SAFLEY: And with iron, the standard is becoming less stringent than the

current secondary use standard?

MR. TWAIT: Excuse me?

MR. SAFLEY: The iron standard proposed by the Agency is less stringent than the secondary use standard?

MR. TWAIT: That's what I have in my notes. The current secondary contact, the current secondary contact standard for total iron is 2 milligrams per liter, and the proposal for dissolved iron is one milligram per liter.

MR. SAFLEY: Our next questions -- I'm sorry.

MR. TWAIT: And the dissolved standard for secondary contact is 0.5 milligrams per liter. So it is becoming less stringent.

MR. SAFLEY: Thank you. Our next questions that have not been asked are on Page 9.

HEARING OFFICER TIPSORD: Mr. Safley, we've been going about an hour and a half. Let's take a ten-minute break.

(Short break taken.)

HEARING OFFICER TIPSORD: Let's go

back on the record. And we're continuing with Mr. Safley and ExxonMobil.

MR. SAFLEY: Thank you, Madam Hearing Officer. The next questions that we had not asked are on Page 9 of our prefiled questions. The first one is Roman Numeral III, Question 11, which I realize deals with chlorides which we've dealt a lot with. So I'm not going to try to replow that ground. I just wanted to clarify, yesterday we spent a fair amount of time talking about chlorides in the context of the Chicago Sanitary and Ship Canal. And my understanding was that the Agency was not aware of violations of the proposed chloride standards in the Chicago Sanitary and Ship Canal except in connection with road deicing in the winter. Assuming that's correct, would the answer from the Agency be the same with regard to the lower Des Plaines River?

MR. TWAIT: It would. I believe the Agency's statement of reasons has indicated that chloride is from removal of road salt.

MR. SAFLEY: And that that's true with

regard to the lower Des Plaines River as well as the Chicago Area Waterway System?

MR. TWAIT: Yes.

MR. SAFLEY: I did want to follow up a little bit with regard to the BMPs that we talked about yesterday that were coming in from municipalities. The question I had was how -- does the Agency have a coordinated approach to reviewing those BMPs, and, for example, a list or a plan for how those BMPs should be structured and what they should contain, or is it being done by different reviewers on a case-by-case basis kind of ad hoc as they come into the Agency?

MS. WILHITE: If I just said yes, will that cover it?

MR. SAFLEY: I tried to make it complicated enough.

MS. WILHITE: The context we're working on BMPs related to chloride is with a TMBL for a couple of waterways presently. So we're working with the parties, the municipalities, IDOT mainly, townships to a small extent to develop those BMPs, and it is

pretty much case by case with each of those entities. Because basically the name of the game is optimizing their road salt application or looking for alternatives to chloride base deicing stuff. Now, we have had some conversation more broadly, and I'm not sure where it's going to go because we're seeing issues outside just those couple of waterways. Whenever we look for chlorides in the wintertime, it seems like we see them, and we're also seeing them in groundwater. So it could be that we develop a strategy more broadly than just those TMBLs, but right now that's what the focus is.

MR. SAFLEY: Is there, with regard to the things that you mentioned, Miss Wilhite, looking for alternatives to chloride-based deicing, the other issues, does the Agency have kind of a model plan that it applies or at least a checklist of issues that it looks for in these things, or is that determined by whoever is reviewing that particular BMP when it comes in?

MS. WILHITE: I'm not certain.

MR. SAFLEY: Okay.

MS. WILHITE: I think that I committed yesterday to checking in to see how the status of implementation is and whether we had seen any measurable progress related to that had this issue on the list.

MR. SAFLEY: Thank you. That was all I wanted to follow up with regard to our Question 11.

Our Question 12 begins temperature. The proposal establishes a period average and a daily maximum temperature limit as opposed to the current standard which includes only a daily maximum. The rationale for the period average is that it would recognize, quote, the realities of within season temperature variations and the thermal tolerances of fish, close the quote, statement of reasons at 86. The period average would change twice per month during five months out of the year and monthly during the rest of the year. Did Mr. Yoder's study and the Agency's proposal take into account the operational impact to a facility

that would be required to adjust its discharge every two weeks for five months of the year in order to comply with the changing temperature limit?

MR. TWAIT: I don't think that the Agency looked at how that would impact the discharger specifically. But in reality they would have to -- their DMR would have, during certain months of the year, would have bimonthly reporting requirement.

MR. SAFLEY: And the Agency did not review any cost issues or operational impact to facilities that would have a changing period average temperature requirement; is that correct?

MR. TWAIT: That is correct.

MR. SAFLEY: Thank you. Our next Question 13, again, similar to some of the discussion we had yesterday regarding the Chicago Sanitary and Ship Canal, and the way in which attainment or nonattainment would be determined. And I just wanted to, rather than ask you the question as is, just to ask whether or not the discussion we had

yesterday about the information that the Agency would consider, where that information comes from, for example, instream monitoring or other sources, and the way in which the Agency, if it found a nonattainment condition, would designate nonattainment by segment as already designated in the integrated list, whether the answer would be the same or different for the lower Des Plaines River than we talked about yesterday for the Chicago Sanitary and Ship Canal?

MR. ESSIG: That would be the same.

MR. SAFLEY: Thank you. One just generic follow-up. That doesn't really fit into the flow of our prefiled questions. Miss Wilhite, we had a discussion yesterday about your discussion with the Bureau of Air regarding some of the issues that have been raised in Corn Products' questions, and during that discussion you mentioned the Bureau of Air had responded in particular on some issues regarding pH emissions as to a couple of entities involved in this

rulemaking, and one is my client Corn Products and also Midwest Generation. Did the Bureau of Water having a discussion with the bureau Of Air regard any other specific dischargers who are involved in this rulemaking?

MS. WILHITE: No.

MR. SAFLEY: Thank you. The last question that we had not asked is on Page 10 of our prefiled questions. It's Roman Numeral IV, Question 2. And I'm going to try to alter it a little bit to avoid -- well, first of all, so correct -- it mentions a study by AIWA, which should have been IAWA, the Illinois Association of Wastewater Agencies. Is the Agency, the Illinois Environmental Protection Agency, aware of a water -- a study that's being conducted by the Illinois Association of Wastewater Agencies regarding classification of water bodies in the State of Illinois at this time?

MS. WILLIAMS: We weren't sure originally what you're referring to, but that helps us now to understand the question.

MR. SAFLEY: That's why I wanted to clarify it.

MS. WILHITE: Yes. I'm aware that the Illinois Association of Wastewater Agency is doing a series of work related to looking at tiers in the classification of aquatic life use for Illinois streams.

MR. SAFLEY: Okay. Does the Agency have any information on what the plan completion date of that study is?

MS. WILHITE: No.

MR. SAFLEY: Okay. Does that study that's being performed by the IAWA relate at all to the Agency's proposal before the Board in this rulemaking?

MS. WILHITE: No.

MR. SAFLEY: The Agency does not foresee any impact of the outcome of that study to the rules that are currently before the Board in this rulemaking?

MS. WILHITE: It's just too early to tell. In their study they have not even defined what sort of tiers they'd be looking at. And so without that information, it

would be difficult to line it up with what we're looking at here.

MR. SAFLEY: Okay. Does the Agency -- Would the Agency see any benefit to waiting for the conclusion of that study before finalizing this rulemaking?

MS. WILHITE: No.

MS. WILLIAMS: And I'd like to add, I think we have talked about this generally already. And, No. 1, we've said a couple of times that this proposal was designed to stand on its own going forward, so it shouldn't have to be changed based on any outcomes like that. I mean we can't say for sure. It's too early, of course. But that was the intent to let it outlast -- I don't want to say outlast, but to stand alone and move forward into the future with whatever happens with that.

And, No. 2, as far as waiting, we did talk also about the legal obligation the Agency has to regularly revisit designations that are lower than full aquatic life use support. So we would be neglecting

that obligation because the same obligation does not apply to general use waters. We don't have a legal obligation to undertake this tiered aquatic life use analysis in the same way we do here.

MR. SAFLEY: Thank you. That concludes our prefiled questions. Thank you.

HEARING OFFICER TIPSORD: Thank you. Then I believe Mr. Ettinger had follow-up based on Mr. Safley's questions yesterday.

MS. WILLIAMS: Scott was asked to do some recalculation during the break and he did that. Can we present that?

HEARING OFFICER TIPSORD: You sure can.

MR. TWAIT: I did the recalculation for hardness value of 140 milligrams per liter, and the chronic standard is 0.0013 milligrams per liter which equates to 123 milligrams per liter -- I'm sorry -- 1.3 micrograms per liter which is significantly more than -- which is greater than the MDL. So as I was talking about it with the District, I believe they were using the

national criteria document.

MS. WASSICK: Thanks. We'll recalculate our tables then.

HEARING OFFICER TIPSORD: Mr. Ettinger?

MR. ETTINGER: I believe yesterday Mr. Safley was asking you about sulfate standards and about the sulfate standards applicable in the waters that we were speaking of. And I believe Mr. Twait referred to the livestock standard not being applicable. Do you recall that testimony?

MR. TWAIT: Yes.

MR. ETTINGER: And the justification for that was that there's no livestock water in this system?

MR. TWAIT: That was the justification, yes.

MR. ETTINGER: Did the Agency consider the effect of sulfate on riparian terrestrial wildlife?

MR. TWAIT: I believe that that conversation came up. We -- I remember having that conversation with Toby, Bob

Mosier, and Brian Cook. And Brian Cook and Bob Mosier are working on the rulemaking for sulfates currently. And we didn't -- They didn't feel that there was enough data for non -- for anything other than livestock water.

MR. ETTINGER: Are you aware of any threatened or endangered wildlife that live in the CAWS or the lower Des Plaines?

MR. TWAIT: The only threatened, which I think may no longer be threatened or soon not to be threatened, taken off the list, is bald eagles. There are a couple of them that are in the area in the winter.

MR. ETTINGER: Are river otter listed?

MR. SULSKI: I don't know what their status is.

MR. ETTINGER: Are you aware if there are river otter living anywhere in the CAWS or the lower Des Plaines?

MR. SULSKI: I am not.

MR. ETTINGER: Are you aware that down the hallway it says that river otter are threatened?

MR. SULSKI: I will take that path out to my office.

MR. ETTINGER: Have you considered the effect of human pathogens on river otter?

MR. TWAIT: I don't know that we expect there to be a problem, but the answer would be no.

MR. ETTINGER: Have you studied the -- Have you -- Strike that.

Have you reviewed any of the reports regarding effects of sewage discharges on sea otters in the Pacific Ocean?

MR. TWAIT: No.

MR. ETTINGER: Are there any mussel beds in the Chicago Area Waterway System or the lower Des Plaines to your knowledge?

MR. SULSKI: I don't know.

MR. ETTINGER: The Agency chose to use its current cadmium standard instead of the new cadmium criteria document; is that correct?

MR. TWAIT: That is correct.

MR. ETTINGER: Do you know whether the

new cadmium criteria document was developed using mussel data?

MR. TWAIT: I do not think the mussel data or any mussel data was involved in the calculation of the national criteria, but we're going to find it and look at it.

MR. ETTINGER: Why don't I hold that question, unless you can check it real quickly. We can all look at the national criteria.

MS. WILLIAMS: We pulled Attachment AA, so we should be able to find it now that we found the attachment.

MR. SULSKI: While he's looking it up, I failed to mention the propensity of the black crowned night herring to use CAWS waters.

MR. ETTINGER: Thank you.

MR. SULSKI: It's state listed.

MR. TWAIT: It does look like they have some data for some mussels. It does look like they had some mussel data, and they have the data ranked and Table 3A of Attachment AA, and it looks like there's -- I

see mussels ranked in toxicity 9, 11, and 10. So there's eight species that are more sensitive than mussels.

MS. WILLIAMS: Does that answer your question?

MR. ETTINGER: Yes.

MR. TWAIT: And then they have some snails.

MR. ETTINGER: Thank you. I have no further questions. Okay.

THE ARBITRATOR: Okay. Does anybody else have any follow-up right now? There's a couple of housekeeping things. One, Miss Franzetti had asked if you would explain exactly what the -- or give us an idea of what the data in Exhibits 38, 39, 40, 41, 42, 43. Is that correct, Miss Franzetti?

MS. FRANZETTI: I didn't remember 38, but you may be right.

HEARING OFFICER TIPSORD: Well, 38 and 39 both are R&D reports, then 40, 41, 42, and 43 are ID & R survey sheets, so.

MS. WILLIAMS: Are you specifically interested in --

MS. FRANZETTI: I was actually focussed on all of these data sheets for the, it looks like the fish surveys, which I --

HEARING OFFICER TIPSORD: Which are like 40, 41, 42, and 43.

MS. FRANZETTI: Exactly. And as I mentioned previously, if you could, for the ones that have numerous sampling stations, and it may not be apparent, I'm just, for example, I'm looking at 41, because I seem to have misplaced 40, and that's got a number of sampling stations. And I just don't know from looking at it whether all of those are within the UAA area, and, if so, which are.

HEARING OFFICER TIPSORD: Go ahead and start with 40. Forty is the Illinois Department of Natural Resources DuPage River Basin Survey Stations, and that just lists -- starts with gizzard chad and then lists across the top several of the DuPage River, so.

MR. ESSIG: Just to start with, Exhibit 40 was submitted in relation to the information regarding white suckers and

stonerollers within the basin.

MS. FRANZETTI: White suckers and?

MR. ESSIG: Stonerollers.

MS. FRANZETTI: As simply as some evidence that they're present in the basin?

MR. ESSIG: Right.

MS. FRANZETTI: These are not, though, UAA waters, right?

MR. ESSIG: They're tributary to the UAA waters.

MS. FRANZETTI: Tributaries to.

HEARING OFFICER TIPSORD: Tributaries to the lower Des Plaines River and Chicago?

MR. ESSIG: Yes.

MR. POLLS: Isn't it true they're in the lower -- aren't they below the I55 bridge?

MR. ESSIG: Yes, they are.

MR. POLLS: The DuPage River does not come within the UAA area. So technically they're not in this basin, the adjoining basin.

MR. ESSIG: They're not part of this rulemaking.

MS. WILLIAMS: Just to clarify, and I may be wrong, but my understanding of why we were provided this data, I believe Howard was asked the question what did he look at regarding our decision to include white sucker as a species on the RAS list. And he threw out a bunch of data that he looked at to suggest it could thrive there, and this was the data he referenced.

MS. FRANZETTI: No. We appreciate that. And it's just I mean a little bit -- We're trying to short-circuit what might need to be questioned after we review it. So to at least cover here, which I'm sure you'll appreciate, you know, what -- exactly what you just said, Ms. Williams, in terms of how you used it. But then we may have questions like this to clarify how the data applies or perhaps doesn't to the UAA areas.

MS. WILLIAMS: I just don't want it to be confused that he looked at this as part of the use designation process itself. I don't think that was his testimony, this particular exhibit.

MS. FRANZETTI: I understand the distinction you're making, but it sounds like it may have influenced the representative species list.

HEARING OFFICER TIPSORD: Would it be possible for us to get in a later filing from the Agency, preferably before the additional hearings, a key to explain -- I mean you have GB-01. I assume that those are keys to a sampling?

MR. ESSIG: Those are station locations, yes.

HEARING OFFICER TIPSORD: Could you get us like even a thing that says G-07 is at this location?

MR. ESSIG: Yes.

HEARING OFFICER TIPSORD: Could we get that from you?

MR. ESSIG: Yes.

HEARING OFFICER TIPSORD: Because I know that Miss Franzetti had asked and wants to know which of these are in the rulemaking, but that is likely to come up again later. If you have the key, we'd have it in hand.

MS. FRANZETTI: I agree.
HEARING OFFICER TIPSORD: That's for all four of the exhibits: 40, 41, 42, and 43.
MS. DIERS: We can do that.
HEARING OFFICER TIPSORD: Thank you. Could we possibly get that as soon as within the next couple of weeks before prefiled testimony is due?
MR. ESSIG: Oh, yeah.
MS. DIERS: Yes.
MS. FRANZETTI: Who is going to take on Exhibit 41.
MR. ESSIG: In terms of? Exhibit 41 is fish data collected on the Des Plaines main stem by Illinois Department of Natural Resources. The stations range from centrally near the Wisconsin state line down to Lockport in the upper Des Plaines River above the sanitary ship canal.
HEARING OFFICER TIPSORD: So none of these were taken in the CAWS or the lower Des Plaines that's on 41?
MR. ESSIG: No. Well, the Des Plaines

River is tributary to the Branden Pool.

HEARING OFFICER TIPSORD: Right. But didn't you just say they were from Wisconsin to --

MR. ESSIG: Wisconsin state line, but it's --

HEARING OFFICER TIPSORD: Right. But it's all upstream of what we're looking at here?

MR. ESSIG: Yes.

HEARING OFFICER TIPSORD: Thank you. Sorry, Miss Franzetti.

MS. FRANZETTI: I never mind your assistance.

MR. ESSIG: Do you have any other questions on 41?

MS. FRANZETTI: No. Well, I guess we should just clarify, but I'm assuming it's the same as the case. This is, again, similar to Exhibit 40, you looked at this data just in terms of both the white sucker and the stoneroller?

MR. ESSIG: Yes.

MS. FRANZETTI: Same thing on

Exhibit 42?

MR. ESSIG: Yes. Exhibit 42, now these are direct tributaries to the Des Plaines River which of those listed, the only ones that would be applicable would be Hickory Creek and -- Hickory Creek and Jackson Creek in terms of being a tributary to the lower Des Plaines within the study area.

MR. POLLS: Is that tributary to the lower Des Plaines?

MR. ESSIG: Yes. I will get you locations for all these sites.

MR. ETTINGER: You're saying Hickory Creek, Manhattan Creek, and Jackson Creek are tributary to the lower December Plaines?

MR. ESSIG: Manhattan is tributary to Jackson.

MR. ETTINGER: But Jackson Creek comes in at Joliet, so.

MR. ESSIG: It comes -- Jackson Creek comes in just upstream of I55.

MR. ETTINGER: So it's tributary to this area?

MR. ESSIG: Yeah.

MR. ETTINGER: Indian Creek comes in where?

MR. ESSIG: Up in this area, Cook County.

MR. ETTINGER: Salt Creek is in DuPage County. Is that the DuPage Salt Creek? There's a Salt Creek in every county in Illinois? Which Salt Creek is this?

MR. ESSIG: That's the one that goes through DuPage and Cook County. These are all included because they were part of the data set. I didn't look at all of these sites, but the ones that were more related to the study area.

MS. FRANZETTI: You know, Mr. Essig, just to make it a little clearer, why don't you read off the sampling station numbers that are above the names like Hickory Creek and Salt Creek that you did -- you were looking at and thought were relevant.

MR. ESSIG: GC-03, GG-06 and GG-04. I think in that case I looked at the furthest downstream one, and at this point I don't

recall based on the station code which one that was.

MS. FRANZETTI: As between GG-06 and GG-04?

MR. ESSIG: Yes. Those would be the ones I've looked at.

MR. ETTINGER: Salt Creek, as I recall, is a tributary to the DuPage River and the DuPage River --

MR. ESSIG: No. It's Salt Creek is a tributary the Des Plaines.

MR. ETTINGER: I'm sorry. The Des Plaines River, the upper Des Plaines River.

MR. ESSIG: Yes.

MR. ETTINGER: I'm sorry.

HEARING OFFICER TIPSORD: That's the other Salt Creek.

MR. ETTINGER: I think I was genuine. This is the Elmhurst Salt Creek.

HEARING OFFICER TIPSORD: Are we ready to go to 43?

MR. ESSIG: Forty-three is the Kankakee basin. Again, this one is outside of the study area. The only station that I

did look at on this one, I think, I believe was the furthest downstream one which would be F-02.

MS. FRANZETTI: And, Mr. Essig, why did you think that data was relevant?

MR. ESSIG: Well, at that point because I was just looking at what was tributary to the Des Plaines River as opposed to not just the --

MS. FRANZETTI: UAA area?

MR. ESSIG: Yes.

MS. FRANZETTI: Okay.

HEARING OFFICER TIPSORD: Any additional follow-up on those exhibits?

Okay. With that, are there any additional exhibits that the Agency has for us today?

MS. DIERS: Yes. We were asked to provide comments on our January 2008 proposal -- 2007 proposal, and we put it together, Marie, but I can separate out. There's seven comments in this package that we put together that we received. Do you want to do it one by one exhibit?

HEARING OFFICER TIPSORD: Let me take a look at it. As much as I hate to type in exhibit numbers, it's probably going to work best if we individually number them. So for the record, we have a U.S. EPA Region 5 comment received May 7, '07, dated May 3, '07, that we will mark as Exhibit 49.

MS. FRANZETTI: And I'm sorry to interrupt, Miss Tipsord, but in terms of what these are, these are all of the comments the Agency received on its January 2007 draft?

MS. DIERS: That went out to the State --

MS. FRANZETTI: Proposal on the UAA. Okay.

MS. WILLIAMS: I think specifically we may have been talking about things that came in after stakeholder meetings. But I mean I think this is everything, things that came in at the stakeholder meetings and after.

MS. FRANZETTI: I guess the only thing I point -- that's why I was asking. Because I do think, just speaking for Midwest Generation, we did put on a Power Point

presentation at the public meetings, and that's already in the record exactly. So just not to omit that it's already been made part of the record.

HEARING OFFICER TIPSORD: Then as Exhibit 50 I will mark a document that has draft 2/12/07 at the bottom, first line is a new Illinois use designation entitled the, quote, Invasive Species Area Zone, closed quote. That will be marked as Exhibit 50, if there is no objection. Seeing none, we'll mark that as Exhibit 50. But we don't know who this is from.

MS. FRANZETTI: I believe that's from Midwest Generation. Sorry.

HEARING OFFICER TIPSORD: Midwest Generation. Does the Agency agree?

MS. DIERS: Yes.

HEARING OFFICER TIPSORD: Would it be okay if I put Midwest Generation on this?

MS. DIERS: That's fine.

MS. FRANZETTI: As long as you add an A plus next to it.

HEARING OFFICER TIPSORD: I've got

gold stars at the office.

MS. FRANZETTI: I like those, too.

MS. DIERS: The next one, Marie, we clipped together, because they're comments from the District. So we -- I don't know if you want to separate it.

HEARING OFFICER TIPSORD: We'll put all of the paper-clipped District comments as one exhibit. That will be Exhibit 51 if there's no objection. Seeing none, it's Exhibit 51.

If there's no objection to Exhibit 49, I'm also admitting that. Seeing none, it's admitted.

Next we have an IEPA document titled Chicago Waterway Lower Des Plaines River UAA. We'll mark that as Exhibit 52.

MS. WILLIAMS: This is just memorandum that Toby put together between the meeting that was held in Joliet and the one that was held in Chicago so that at this Chicago meeting folks could be aware of issues that had already come up at the Joliet meeting. So this is more a summary of verbal comments,

not quite relevant to the issue of written comments, that we got in that fit with this.

HEARING OFFICER TIPSORD: Seeing no objection, that's Exhibit 52.

Exhibit 53 is from the Environmental Law Policy Center. If there is no objection, we will mark that and admit it as Exhibit 53. Seeing none, it is Exhibit 53.

And, Albert, I have a gold star at the office for you, too.

MR. ETTINGER: That's okay. It's good enough for Franzetti. It's not good enough for me.

MS. FRANZETTI: Well, having you in the same crowd kind of detracts a bit, but I'll get over it.

HEARING OFFICER TIPSORD: Next I have an e-mail from Phillip Moy to Toby Frever. If there's no objection, we will mark that as Exhibit 54 and admit it. Seeing none, it is Exhibit 54.

And last we have Alliance for the Great Lakes. And if there's no

objection, I will mark that as Exhibit 55. Seeing none, it is Exhibit 55.

MS. FRANZETTI: I don't know if anybody here can answer the question. It looks like this also was prepared at some point after the meetings. I mean I think I saw in a quick glance through it, so at some point in 2007. Does anybody know what the approximate date of Exhibit 55 is?

MR. ETTINGER: I believe it was prepared in July.

MS. WILLIAMS: It was definitely sometime between April and the end of July of '07 that we received it, I should say. I don't know.

HEARING OFFICER TIPSORD: And I bet we have more documents.

MS. WILLIAMS: One more.

HEARING OFFICER TIPSORD: There's a 2000 copyright on the back of the -- 2007 copyright on the back of the Alliance for Great Lakes Report Agenda.

MS. DIERS: The last document we have to enter is the January 2007 proposal that we

sent out. And it has an e-mail on the cover of it that tells the stakeholder group what exactly is in this and kind of a summary.

HEARING OFFICER TIPSORD: If there's no objection, we will mark that as Exhibit No. 56. Seeing none, it is Exhibit No. 56.

MR. FORTE: Is that the entire clipped document?

HEARING OFFICER TIPSORD: We'll do it as one, because the e-mail talks about attachments, so.

MR. SAFLEY: Miss Tipsord, I had a question regarding this Exhibit whenever it's appropriate.

HEARING OFFICER TIPSORD: Yes.

MR. SAFLEY: To the Agency, the first paragraph of this e-mail, the last sentence says IEPA is working on responses to comments on the UAA reports which will be available on www.Chicagoareawaterways.org at a later date. Have those responses been entered into evidence?

MS. WILLIAMS: No. They have not.

They don't exist, if that's the question. We never completed the document that's referenced.

MR. SAFLEY: Are there drafts that are started? Because it says working on, which implies there was a draft at that point.

MS. WILLIAMS: No. I mean we worked on compiling all the questions that were asked, so there was an attempt to filter out all the questions. But it was way too burdensome to actually answer them, so no. Does that make sense? I'm not explaining this very well. We haven't talked about this, I don't think previously, have we?

MR. SAFLEY: Not that I recall. If I recalled, I wouldn't have asked.

MS. WILLIAMS: This is a Toby question. Do you want to try to --

MS. FRANZETTI: So take it away, Mr. Twait.

MR. TWAIT: I don't know that I want to -- I think at some point Toby made the commitment that all the questions would be addressed in the responsiveness summary.

And, as Deb said, we started the compilation of that. And at a similar point we started doing responsiveness summary and the statement of reasons and our proposal, and it got to the point that because of workload Toby made the decision of whether to continue with the responsiveness summary or to work on the statement of reasons and our proposal. And the decision was made that we would forego the responsiveness summary in order -- because workload -- to work on the proposal and statement of reasons.

MR. SAFLEY: Is the start that was made to the responsiveness summary contained in the record?

MS. WILLIAMS: That's where I was explaining there are no responses drafted, just an attempt to compile the questions.

MR. SAFLEY: I'm sorry. Then I misunderstood. I heard Mr. Twait say there were two different things: One, a compilation of questions; two, a start on responsiveness summary. And -- maybe I misunderstood.

MR. TWAIT: That was -- the start on the responsiveness summary was to group -- when we first started looking at them, we could either try to answer all of the questions proposed by each and every person. But the decision was made that we would have another staff person that was unrelated to this go through all the questions and group the questions according to temperature, bacteria, and et cetera. And when they had -- as they were going through that compilation putting everything together, it just got too unwieldily and timely.

MR. SAFLEY: So is that compilation included in the record?

MR. TWAIT: And as Deb is reminding me, at that point a lot of the comment became irrelevant because we had changed the proposal since those comments were made because some of them were numerous years old during the UAAs.

MR. SAFLEY: Okay. Is the compilation that was started included in the administrative record?

MS. WILLIAMS: No.

MR. SAFLEY: Was the compilation drawn only from written documents or was it drawn from oral comments made at stakeholder meetings or both or do we know?

MR. TWAIT: I believe everything was written.

MR. SAFLEY: Are all of those written documents that were the source of the beginning of the compilation included in the record?

MR. TWAIT: For the lower Des Plaines they're attached to the CD and appendix -- Attachment A.

MR. POLLS: If I understand, those comments were specifically given by numerous agencies on the finished UAA reports of the two contractors; is that correct? Is that what -- because I don't have it in front of me, but I believe that's what the comments you're talking about.

MR. SAFLEY: Draft.

MR. POLLS: That's something different, okay.

MR. SAFLEY: I'm sorry. You had --
MR. TWAIT: The ones that are --
MS. WILLIAMS: The draft what?
MR. POLLS: The draft --
MR. SAFLEY: Back to --
MR. POLLS: Draft proposal.
MS. WILLIAMS: These are not comments on the proposal that we're talking about. Just on the UAA reports.
MR. SAFLEY: No. I understand. But the question I had was are all -- we've talked about this compilation and the answer was the compilation is not in the record. But are the documents that were drawn from for the compilation in the record? If I want to go back and try to reconstruct was the Agency asked a particular question, I don't have the compilation, but do I at least have the documents that that staff person, unrelated staff person, who you mentioned was drawing from so I can look back through all of those and say how this question came up.
MR. TWAIT: I believe that all the comments on the draft UAA for the lower Des

Plaines are included as an attachment on the CD, and I think they are part of the record.

MR. SAFLEY: What about with the Chicago Area Waterway System UAA?

MR. SULSKI: I'm not certain. I'm not certain whether we began -- whether they are all in the record in the existing record.

MR. SAFLEY: Okay. Well, I --

MR. SULSKI: We can go back and look.

MR. SAFLEY: I would request if the Agency received written questions or comments on the Chicago Area Waterway System UAA that are not in the record, we would request that those be placed into the record as something that the Agency had in its administrative record as it was developing through you, and whether or not it ever issued a formal written response to it. Thank you.

HEARING OFFICER TIPSORD: I heard an agreement from them, by the way. Okay. Are there any other questions? Any additional documents to be entered?

MS. DIERS: No. We don't have any more documents to enter.

HEARING OFFICER TIPSORD: We still have some documents coming, though; isn't that correct?

MS. DIERS: We have sediment data that I mentioned yesterday that we're trying to get copied that was asked of us in March. And then, of course, there was some requests today to get together. And then with Chris Yoder, there were several questions that were outstanding to him. And I'm in the process of working on an affidavit. I'm in the process of over a month now trying to finalize an affidavit with Mr. Yoder to address issues that were raised at the previous hearing.

MS. WILLIAMS: In most cases those are he was asked for a document and he is telling us that it doesn't exist, but we want that to come from him.

MS. DIERS: I can answer that, you know, I have a few of the answers, but I wanted to do it in a sworn affidavit.

MS. FRANZETTI: Actually, along those lines, can we pretty much assume that

anything that was asked for from Yoder that didn't come in in the course of your production of information relating to him in these two days doesn't exist -- is not going to be forthcoming because he can't find it or it doesn't exist or you don't know?

MS. WILLIAMS: I think that's probably true, but I'd rather answer it if there's a specific.

MS. FRANZETTI: I don't remember. I haven't had a chance to even look at the CD to see what you did produce on that with regard to Mr. Yoder. Okay. We don't have to finalize it today.

The only additional thing I was just going to add, and I'll say it on everyone's behalf to avoid a bunch of me toos, because I'm sure everybody feels this way, is, you now, we have tried a bit to look at the exhibits that have been produced. Obviously we went through some of them just a few moments ago. But there is no way, I think, that any of us could review all of this, the CDs, et cetera, and confirm as of

right now that we don't have any other questions. So I would just ask that there be an agreement that we have not waived by not asking any questions today on these materials, we've not waived our right to approach you, Madam Hearing Officer, in the future to say we have some follow-up questions on these materials.

HEARING OFFICER TIPSORD: Absolutely. I appreciate that, getting that on the record. I 100 percent agree, and I'm seeing nods from the Agency that they agree as well.

MS. DIERS: We agree.

HEARING OFFICER TIPSORD: So, yes, that will be it. Is there anything else?

MR. SAFLEY: Yes, ma'am. The only other thing I want to ask -- I thank you, Miss Diers, for the response about the affidavit with regard to the Yoder documents. The only thing I was going to ask is the Agency aware of any documents other than those Yoder documents that had been specifically asked for and either the Agency has concluded don't exist or cannot be found

or is still planning -- is still working on putting together that we haven't already talked about here?

MS. DIERS: I believe that I have been through all the transcripts, I believe that we have tried to address everything that is asked. But, again, if there is something that someone sees that they don't think that we've responded to, please let me know. Because I could have possibly missed something. But sitting here today, I believe that we've tried to address everything that has been asked of us so far.

HEARING OFFICER TIPSORD: And I believe you deserve a round of applause for being all the way through the transcripts. Anything else?

All right. This has been a long ten days, but I want to say again, as I've said at close of all the hearings, how much I appreciate your courtesy, your professionalism, and most of all, your good humor. We've gotten a lot of good information, and I'm looking forward to the

next set of hearings. I will put a hearing officer order out soon. Mr. Harley is checking about a room to do a public information, public testimony night in June. The other hearings I've already requested rooms for in September. Once we get rooms we'll put out the finalized prehearing deadlines and all of that. For now, thank you very much, and I look forward to seeing you all again soon. We're adjourned.

(At which time the hearing was continued sine die.)

* * * * * * *

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

I, LAURA MUKAHIRN, being a Certified Shorthand Reporter doing business in the City of Chicago, Illinois, County of Cook, certify that I reported in shorthand the proceedings had at the foregoing hearing of the above-entitled cause. And I certify that the foregoing is a true and correct transcript of all my shorthand notes so taken as

aforesaid and contains all the proceedings had at the said meeting of the above-entitled cause.

_____

LAURA BERNAR, CSR
CSR NO. 084-003592