

ILLINOIS POLLUTION CONTROL BOARD

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

REPORT OF PROCEEDINGS held in the
 above-entitled cause before Hearing Officer Marie
 Tipsord, called by the Illinois Pollution Control
 Board, taken before Laura Mukahirn, CSR, a notary
 public within and for the County of Cook and State
 of Illinois, at 160 North LaSalle Street, Suite 505,
 Chicago, Illinois, on the 3rd day of March, 2009,
 commencing at the hour of 1:00 p.m.

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A P P E A R A N C E S

MS. MARIE TIPSORD, Hearing Officer
MR. G. TANNER GIRARD, Chairman
MR. THOMAS JOHNSON, Member
MR. ANAND RAO, Member
MS. ALISA LIU, Member
DR. SHUNDAR LIN, Member
MR. GARY BLANKENSHIP, Member
 Appearing on behalf of the Illinois
 Pollution Control Board

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 Water Reclamation District

1 HEARING OFFICER TIPSORD: Let's go
2 back on the record. We will start with
3 Mr. Mastracchio's testimony. Let's swear him
4 in again. I realize actually -- give me --
5 Mr. Fork -- Go back off the record.

6 (Off the record.)

7 HEARING OFFICER TIPSORD: Let's go
8 ahead then. Sorry about that. And we'll
9 have Mr. Mastracchio sworn back in, please.

10 (Witness sworn.)

11 MR. ANDES: Here is his testimony.

12 HEARING OFFICER TIPSORD: If there is
13 no objection, we will enter the prefiled
14 testimony of John Mastracchio as Exhibit
15 No. 223.

16 Seeing none, it is Exhibit 223.
17 And, Miss Williams, I have my notebook mixed
18 up, but I understand you have some prefiled
19 questions.

20 MS. WILLIAMS: Page 76. We have a few
21 left on that page, yes. Good afternoon,
22 Mr. Mastracchio. Welcome back. I'll start
23 with Question No. 1 from my prefiled
24 questions under your dissolved oxygen

1 testimony. Based on the cost provided by
2 Mr. Zenz and others -- I should say Dr. Zenz
3 and others, do you have an opinion on how
4 many supplemental aeration stations could be
5 built and operated by the District without
6 exceeding the financial limitations you
7 described?

8 MR. MASTRACCHIO: I don't. No, that
9 analysis wasn't completed.

10 MS. WILLIAMS: So you looked at an
11 all-or-nothing type scenario?

12 MR. MASTRACCHIO: That's correct.

13 MS. WILLIAMS: Question two: Do you
14 know if the cost you relied on for your
15 analysis took into account the improvements
16 from TARP when establishing design treatment
17 targets?

18 MR. MASTRACCHIO: No, I don't know.

19 MR. ANDES: I think Dr. Zenz answered
20 that question.

21 MS. WILLIAMS: Would your conclusions
22 change if the cost figures had to be updated
23 to address this or other issues?

24 MR. MASTRACCHIO: It would obviously

1 depend on the magnitude of the changes. So I
2 can't answer that question right now.

3 MS. WILLIAMS: Question 3: How is the
4 fact that there is more uncertainty in the
5 dissolved oxygen cost estimates from CTE than
6 in the chlorination estimates reflected in
7 your results and conclusions?

8 MR. MASTRACCHIO: What I did in my
9 analysis was analyze the costs that are --
10 were provided by CTE. So I used their best
11 estimates. I did not do a range of
12 estimates. I just used the numbers that were
13 presented by CTE.

14 MS. WILLIAMS: Why are the projects
15 for which MWRDGC has committed to use its
16 available funds more important than the ones
17 being addressed in this proceeding? That's
18 Question 4.

19 MR. MASTRACCHIO: I don't have an
20 opinion on the priority of the various types
21 of projects, so I really can't answer that.

22 MS. WILLIAMS: Do you know who might
23 have an opinion on this?

24 MR. MASTRACCHIO: I don't know.

1 MS. WILLIAMS: Question five: Are you
2 able to express the cost of supplemental
3 aeration in terms of affordability; that is
4 the percent of median household income of the
5 sewers served by -- sewer users served by
6 MWRDGC?

7 MR. MASTRACCHIO: No. I didn't
8 complete that analysis.

9 MS. WILLIAMS: Would you be qualified
10 to do so if you had been requested to?

11 MR. MASTRACCHIO: Yes. I think I
12 would.

13 MS. WILLIAMS: Do you recall -- I
14 thought that last time, and it might have
15 been during Mr. McGowan's testimony, but I
16 think it was during yours, there was some
17 discussion about references to this type of
18 information, median household income, that
19 had been cited to, but not provided? Does
20 that ring a bell?

21 MR. MASTRACCHIO: Yeah. There was a
22 broad range of information that was requested
23 early on in the study, and I believe there
24 were some comprehensive annual reports from

1 the various communities that were requested.
2 And I think there was other economic
3 information in general that was requested
4 early on. So, yeah, I am aware of that.

5 MS. WILLIAMS: But do you know -- I
6 think we asked for that information to be
7 provided last time.

8 MR. ANDES: Yes. There were a number
9 of comprehensive annual reports in various
10 communities that were listed and attached to
11 Mr. McGowan's testimony. And our
12 understanding is that of that list the only
13 ones that were actually obtained and reviewed
14 were the ones for the Skokie Park District
15 and Hanover Park. And we have those
16 documents on this disc.

17 MS. WILLIAMS: So can we just clarify.
18 You're saying that some of the information
19 cited in Mr. McGowan's testimony actually
20 shouldn't have been cited because it wasn't
21 available?

22 MR. ANDES: Actually, if you recall
23 what Mr. McGowan said in his testimony was
24 that an attachment listed a lot of

1 information. The information listed in that
2 attachment was never used in doing his report
3 and that attachment was just not removed from
4 his report. So the information was not
5 considered in the process of doing
6 Mr. McGowan's or Mr. Mastracchio's
7 testimony. But since the information was
8 listed in that attachment, it was never
9 omitted. We were asked for copies of
10 whatever we had of those CAFRs. And the two
11 CAFRs that we do have that were obtained, but
12 not used in the analysis, were these two.

13 MS. WILLIAMS: So the other ones were
14 not -- you no longer have them.

15 MR. ANDES: I don't think we ever did.
16 They were listed as documents that were going
17 to be reviewed. They never were reviewed.

18 MS. WILLIAMS: Thank you. I think I
19 understand now.

20 MR. ANDES: I don't know if you want
21 these put in the record or not.

22 MS. WILLIAMS: Sure.

23 HEARING OFFICER TIPSORD: We will mark
24 John Mastracchio's Skokie Park District 2007

1 Annual Report, Hanover Park 2000 Annual
2 Report as Exhibit 224 if there is no
3 objection.

4 Seeing none, it's Exhibit 224.

5 MS. WILLIAMS: Mr. Mastracchio, do you
6 know whether any published information
7 regarding the 2009 economic stimulus proposal
8 would change any of the information in your
9 testimony up to this point?

10 MR. ANDES: Is the Agency contending
11 that any of these projects are actually
12 shovel ready or could be shovel ready in --

13 MS. WILLIAMS: I think the question
14 was very clear. If he doesn't understand it,
15 I can try to rephrase it.

16 MR. MASTRACCHIO: Could you rephrase
17 that, please.

18 MS. WILLIAMS: Okay. In your earlier
19 testimony, you testified regarding the
20 ability of the District to afford any
21 additional disinfection technology, now in
22 this testimony dissolved oxygen technology.
23 Does existence of economic stimulus funds
24 change any of those conclusions?

1 MR. MASTRACCHIO: No, they do not.

2 MS. WILLIAMS: Do you want to explain
3 why?

4 MR. MASTRACCHIO: Well, the reason why
5 is that I have no idea at this point whether
6 any economic stimulus will wind its way to
7 the District and could be used for any of the
8 projects that were identified as part of my
9 testimony. So that's the reason.

10 MS. WILLIAMS: Okay. And potentially
11 if some funds were available to fund other
12 projects that are on the books, could that
13 potentially change any of your conclusions?

14 MR. MASTRACCHIO: I think the
15 magnitude of the cost associated with DO and
16 the amount of stimulus money that's available
17 throughout the -- for the water and sewer
18 component of the stimulus, it wouldn't change
19 my conclusion. Because I don't think the
20 amount of stimulus money would make any
21 difference on the analysis.

22 MR. ANDES: If I can follow up.
23 Mr. Mastracchio, in Table 1 of your detailed
24 report, if I can summarize, I believe that

1 the present value costs for disinfection are
2 almost a billion dollars and dissolved oxygen
3 about 650 million. Am I correct in talking
4 about --

5 MS. WILLIAMS: What page are you on?

6 MR. ANDES: Page 2 of
7 Mr. Mastracchio's detailed report, the
8 economic assessment. So we're talking about
9 almost \$2 billion. Are you aware that the
10 total amount for wastewater provided in the
11 stimulus package for the whole country is
12 \$4 billion?

13 MS. WILLIAMS: Are you going to offer
14 evidence?

15 MR. ANDES: I'd be glad to provide a
16 copy of that bill for the record.

17 MR. MASTRACCHIO: I'm aware that the
18 combined water and sewer is six billion, but
19 I hadn't heard of four billion.

20 MR. ANDES: It's two billion for
21 drinking water.

22 MR. MASTRACCHIO: I think you're
23 right.

24 MR. ANDES: Four billion for the whole

1 country for wastewater?

2 MR. MASTRACCHIO: Yes.

3 MR. ANDES: Are you also aware, and
4 I'd be glad to provide information in the
5 record, that the money is supposed to be
6 spent in the next year?

7 MR. MASTRACCHIO: It is intended for
8 projects that are ready to be constructed
9 that would create jobs immediately is my
10 understanding.

11 MR. ANDES: Talking about anything
12 here on disinfection or DO that would be
13 ready to start spending money in the next
14 year?

15 MS. WILLIAMS: Objection. I don't
16 think that this witness has testified as to
17 anything related to when these projects can
18 begin.

19 MR. ANDES: Actually, the charts he
20 has have time lines as to when the investment
21 would begin. We can certainly show those
22 charts, if I can.

23 MS. WILLIAMS: Do you want this
24 witness to be asked questions about which

1 projects are shovel ready and which ones are
2 not, Fred? I'm just thinking I don't think
3 that's appropriate.

4 MR. ANDES: You're implying --

5 MS. WILLIAMS: I'm not trying to imply
6 that. If you want me to explore that area we
7 can. But that was not my intention to get
8 into with Mr. Mastracchio technical --

9 HEARING OFFICER TIPSORD: I think this
10 is well within where your questions were
11 going. You were asking about stimulus money
12 and we're establishing that stimulus money
13 has to be spent within the next year. And so
14 that leads to the logical conclusion, what's
15 ready to go next year. So you may ask him
16 the question.

17 MR. ANDES: Mr. Mastracchio, I'll
18 direct your attention to Attachment 5 of your
19 testimony, and I do believe we have copies of
20 that. It isn't in the testimony, but we can
21 still make it an exhibit as well. This is
22 Attachment 5 entitled, Financial Results
23 Including Dissolved Oxygen and Ultraviolet
24 Disinfection Costs Compared to Financial

1 Limitations and Restrictions.

2 HEARING OFFICER TIPSORD: Since this
3 is color and not all of the -- we'll make it
4 an exhibit. Exhibit 225, if there's no
5 objection?

6 Seeing none, it's Exhibit 225.

7 MR. ANDES: Would you like to explain
8 the basis for your numbers?

9 MR. MASTRACCHIO: Sure. What you see
10 on the top figure is a time line that was
11 laid out based on information that is
12 contained in CTE testimony. And it lays out
13 an eight-year time line with the construction
14 phase being the last three years of the
15 eight-year time frame. So it's my
16 understanding that the economic stimulus
17 money would require projects to be ready,
18 shovel ready, within a very short time frame,
19 certainly not within an eight-year time
20 frame. So I don't think these projects would
21 be applicable to the stimulus plan.

22 MS. WILLIAMS: And are there other
23 projects that you would describe as
24 shovel-ready, Mr. Mastracchio?

1 MR. MASTRACCHIO: That I don't know.
2 I haven't looked at that. Other projects
3 that are --

4 MS. WILLIAMS: In the master plans for
5 the various facilities we're talking about
6 here.

7 MR. MASTRACCHIO: I don't know the
8 time lines for those.

9 MS. WILLIAMS: Would you -- hang on.

10 MR. ANDES: I assume that the Agency
11 would have detailed knowledge of how much
12 stimulus money the whole state is getting
13 from federal government which might put this
14 into perspective.

15 MS. WILLIAMS: I don't have any other
16 questions for this witness.

17 HEARING OFFICER TIPSORD: Miss Dexter?

18 MS. DEXTER: Jessica Dexter for the
19 Environmental Law Policy Center. I will
20 start with my first prefiled question. Do
21 you know whether the Chicago Area Waterway
22 System currently meets the existing dissolved
23 oxygen standards?

24 MR. MASTRACCHIO: No. I don't know.

1 That was beyond what I looked at.

2 MS. DEXTER: All right. Do you know
3 what effect any existing level violations of
4 the current dissolved oxygen standards have
5 on the district?

6 MR. MASTRACCHIO: No. Again, that was
7 beyond what I looked at.

8 MS. DEXTER: All right. Do you know
9 what investments the District intends to make
10 to assure compliance with the water quality
11 standards that are now applicable to the
12 CAWS?

13 MR. ANDES: I guess I'll interject at
14 this point, too. It's going to be clear
15 Mr. Mastracchio doesn't have answers to these
16 questions. Dr. Granato is our last witness
17 from the district and can certainly answer
18 them. But my second objection is that given
19 that all of the stakeholders here have been
20 working for something like eight years to
21 change the current water quality standards,
22 and everybody acknowledges those standards
23 are not appropriate, not attainable, I'm not
24 sure what relevance they have to this

1 proceeding where we're deciding what new
2 standards to impose on the CAWS. And they
3 have to be justified on their own as water
4 quality standards that are valid. So I'm not
5 sure what the existing standards would be --

6 MS. WILLIAMS: I object to your
7 characterization of the Clean Water Act
8 requirements of what this rulemaking has to
9 show for it, but --

10 HEARING OFFICER TIPSORD: All right.

11 MS. DEXTER: I also don't think --

12 HEARING OFFICER TIPSORD: I overrule
13 your objection. And she asked to his
14 knowledge, so he can answer certainly to what
15 his knowledge is.

16 MR. MASTRACCHIO: Could you repeat the
17 question, please.

18 MS. DEXTER: Yes. Do you know what
19 investments the District intends to make to
20 ensure compliance with the water quality
21 standards that are now applicable to the
22 CAWS?

23 MR. MASTRACCHIO: No, I don't.

24 MS. DEXTER: All right. Has the

1 District determined the different costs
2 between meeting the differences with the CAWS
3 and the proposed standards?

4 MR. MASTRACCHIO: I don't know the
5 answer to that question.

6 MS. DEXTER: All right. I'll skip to
7 Question 6 then. Can the District pay for
8 improvements needed to meet the currently
9 applicable dissolved oxygen standards without
10 an act of the state legislature or a
11 referendum?

12 MR. MASTRACCHIO: I don't know. I
13 haven't looked at that specifically.

14 MS. DEXTER: All right. I have
15 nothing further.

16 THE COURT: Anything else for
17 Mr. Mastracchio?

18 MR. ANDES: A couple of follow-up
19 questions.

20 Mr. Mastracchio, on
21 Attachment 5, directing your attention to
22 Figure 5-2 where we're talking about the
23 combined impact of dissolved oxygen and
24 disinfection costs. And we're looking at the

1 extent to which all the costs combined, we
2 can see the text implementation in Figure
3 5-2. In 2016 that limit, that amount over,
4 going over the tax cap, would mean how many
5 dollars?

6 MR. MASTRACCHIO: That's about
7 \$40 million in that year.

8 MR. ANDES: \$40 million over the tax
9 cap which would then require referendum act
10 by the general assembly, et cetera?

11 MR. MASTRACCHIO: That's correct.

12 MR. ANDES: And then in Figure 5-3,
13 this is debt service compared to the debt
14 service limitation. In 2014 and then after
15 that we go above the limitation. In 2016
16 what does that number amount to first in
17 terms of debt service?

18 MR. MASTRACCHIO: That is about a --
19 It's about \$100 million in debt service which
20 is over the debt service extension
21 limitation.

22 MR. ANDES: And what does that equate
23 to in terms of capital expenditures?

24 MR. MASTRACCHIO: If I were to convert

1 that to a capital project number using
2 25-year amortization term and an interest
3 rate of 5 percent, say, that would result in
4 a capital project overage of about -- It's
5 over a billion dollars and it's about
6 1.3 billion.

7 MS. WILLIAMS: Can you tell us what
8 you use to base your 5 percent assumption for
9 the interest rate on?

10 MR. MASTRACCHIO: Well, that was --
11 It's probably a little higher now, but that
12 was based on the interest rates that were
13 included in the analysis that I presented as
14 part of my testimony.

15 MS. WILLIAMS: And you think it's
16 higher now than when you prepared your
17 testimony? Is that what you said?

18 MR. MASTRACCHIO: I believe the
19 municipal bond market, yeah, the interest
20 rates of the bond market are slightly higher
21 than 5 percent.

22 MR. ANDES: Now, another issue that we
23 talked about a little earlier during
24 Mr. Kunetz's testimony was another potential

1 cost for nutrient removal. And here, as I
2 understand it based on, again, that table you
3 had with total costs, total costs for UV,
4 disinfection, and for DO were about 1.6
5 billion. Am I right?

6 MR. MASTRACCHIO: Yes.

7 MR. ANDES: Okay. And Mr. Kunetz's
8 testimony, as I recall, said that potential
9 cost for nutrients removal could be 2.8
10 billion or above. And I believe you were
11 there for that testimony?

12 MR. MASTRACCHIO: Yes.

13 MR. ANDES: If you were to add in cost
14 of nutrient removal to the costs already
15 included in this table, what would be the
16 impact?

17 MR. MASTRACCHIO: Well, if I were to
18 add \$2.8 billion in the same general time
19 frame, the overages would be significantly
20 more than the overage above the limitations
21 shown on chart here. So it would have a
22 significant impact.

23 MR. ANDES: Okay. Thank you.

24 HEARING OFFICER TIPSORD: Anything

1 further?

2 MS. WILLIAMS: I just have -- can I
3 ask one last one?

4 HEARING OFFICER TIPSORD: You can ask
5 as many as you like.

6 MS. WILLIAMS: Mr. Mastracchio, last
7 time you were here, there was some testimony
8 regarding the ability of the District to
9 increase user fees. Do you recall being
10 asked some questions about that?

11 MR. MASTRACCHIO: Yes.

12 MS. WILLIAMS: And you recall offering
13 to provide additional information?

14 MR. MASTRACCHIO: Yes.

15 MS. WILLIAMS: Do you know if that
16 information has been provided?

17 MR. ANDES: We're about to.

18 MS. WILLIAMS: Well, go ahead. I
19 would hate for to you have to walk home with
20 any of your exhibits.

21 MR. ANDES: Thank you. The
22 information that we're unfolding here all
23 relates to the applicable statutory and
24 regulatory requirements that apply under the

1 Clean Water Act with regard to user charters.
2 And particularly requirements for
3 proportionality in terms of dealing with
4 different classes of users in proportional
5 way, making sure that they pay their share of
6 the costs. So we have a number of materials
7 to provide on that and they can be discussed
8 in detail.

9 The first document that we'll
10 offer for that purpose, and then whether
11 Mr. Mastracchio can answer questions, is from
12 the U.S. Code, 33, Section 1284, concerns
13 grants for construction of treatment ways.
14 I'll provide a couple of other documents
15 since they're related.

16 HEARING OFFICER TIPSORD: If there's
17 no objection, we'll mark 33 USCA Section
18 1284, it says Page 2 of 13, but there aren't
19 13 pages in this document. But it does have
20 another numbering system that says Page 1,
21 2, 3, and 4. We'll mark that as Exhibit 226.
22 Seeing no objection, it's Exhibit 226.

23 MR. ANDES: The second document is
24 from the Code of Federal Regulations, and

1 this is 40 CFR 35.929-1 and -2, Approval of
2 User Chart System is the title on the first
3 page.

4 HEARING OFFICER TIPSORD: If there's
5 no objection, we will mark that document as
6 described as Exhibit 227.

7 Seeing none, it's Exhibit 227.

8 MR. ANDES: And I think those
9 documents are accurate to address the
10 questions.

11 MS. WILLIAMS: That's all I have.

12 HEARING OFFICER TIPSORD: Do you have
13 any -- was that all, Miss Williams?

14 MS. WILLIAMS: I'm sorry. That's all
15 we have.

16 HEARING OFFICER TIPSORD: Okay.
17 Anyone else?

18 MR. ARMSTRONG: One follow-up.

19 HEARING OFFICER TIPSORD: Identify
20 yourself.

21 MR. ARMSTRONG: Andrew Armstrong for
22 the people of the State of Illinois. Are
23 these the only documents which you believe
24 support the statement you made earlier

1 regarding user charges?

2 MR. ANDES: Which statement are you
3 referring to?

4 MR. ARMSTRONG: That they cannot be
5 raised to fund disinfection projects, and I
6 guess also DO projects.

7 MR. MASTRACCHIO: This is the basis
8 for that statement. There may be other
9 documents that support this. One in
10 particular would be related to the District's
11 approval of their user charge system by the
12 EPA which my understanding follows the EPA
13 user chart regulations.

14 HEARING OFFICER TIPSORD: And that's
15 U.S. EPA?

16 MR. MASTRACCHIO: Yes, it is.

17 MR. ANDES: Now that we've clarified a
18 little bit what the question was, there are a
19 couple other documents which do relate to the
20 issue of whether user charters can be used to
21 pay for new construction. Because they
22 can't. We have two documents: One is
23 Appendix B to Subpart E, Part 35, federal
24 guidelines, user chart is for operation and

1 maintenance for publically-owned treatment
2 works. This is an EPA document.

3 HEARING OFFICER TIPSORD: If there's
4 no objection, we will mark Appendix B to
5 Subpart E to Subpart 35 Federal Guidelines as
6 Exhibit 228.

7 Seeing none, it's Exhibit 228.

8 MS. WILLIAMS: I don't have an
9 objection. I just want to clarify. It looks
10 like -- I just want to clarify the citation,
11 Fred. Is this a reg?

12 MR. ANDES: Which document?

13 MS. WILLIAMS: It looks lake a
14 regulation, so I just wanted to clarify.

15 MR. ANDES: It's an appendix to 40 CFR
16 Part 35.

17 MS. WILLIAMS: Of appendix B?

18 MR. ANDES: Yes.

19 And then we have one more
20 document. This is an excerpt from the EPA
21 document entitled user charge guidance manual
22 for publically-owned treatment works, June
23 1984. And we're providing this one page
24 entitled user charge regulatory requirements.

1 The full document is available, but that is
2 the part that applies directly. With that, I
3 think that sets forth what we believe are the
4 key statutory and regulatory provisions
5 governing what user charters can cover,
6 operation maintenance and replacement, and
7 how the user chart system can be and must be
8 set up.

9 HEARING OFFICER TIPSORD: All right.
10 If there's no objection, we will mark User
11 Charge Guidance Manual For Publically Owned
12 Treatment Works, cover page and one page as
13 Exhibit 229.

14 Seeing none, it's Exhibit 229.

15 MS. WILLIAMS: Marie, is this -- I
16 just wanted to make sure this is different
17 than Exhibit 162. It looks like it is.

18 MR. ANDES: What is Exhibit 162?

19 MS. WILLIAMS: It says Water and
20 Wastewater Pricing and Information Overview.

21 MR. ANDES: I think that's a different
22 document.

23 MS. WILLIAMS: And it's a 2003
24 document. Okay. Thank you.

1 HEARING OFFICER TIPSORD: Are there
2 any additional questions then? Thank you
3 very much, Mr. Mastracchio. That moves us on
4 to Miss Wasik. Can we have Miss Wasik sworn
5 in, please.

6 (Witness sworn.)

7 MR. ANDES: This testimony is entitled
8 prefiled testimony of Jennifer Wasik and
9 specific to cyanide.

10 HEARING OFFICER TIPSORD: If there's
11 no objection, we will enter the cyanide
12 testimony of Jennifer Wasik as Exhibit 230.
13 Seeing none, it's Exhibit 230. And I believe
14 IEPA has some questions?

15 MS. WILLIAMS: Thanks. Question 1:
16 You testified that MWRDGC is recommending a
17 chronic cyanide standard of ten micrograms
18 per liter or higher. How much higher would
19 you recommend?

20 MS. WASIK: In my testimony, I
21 suggested ten micrograms per liter or higher
22 because that was the level that the IPCB
23 agreed to set the chronic cyanide standards
24 for the Cook County general use waters

1 including Salt Creek, Higgins Creek, West
2 Branch DuPage River, and the Des Plaines
3 River in a 1995 rulemaking. This is because
4 the currency need chronic standards for
5 general use waterways based on toxicities to
6 the most cyanide-sensitive fish. And these
7 species include rainbow trout, brook trout,
8 which are both cold water species of fish,
9 and then yellow perch and bluegill. Since
10 rainbow trout and brook trout are not found
11 or expected to be found in the warm waterways
12 of the CAWS, I suggested that the ten
13 micrograms per liter. It seems only fitting
14 that the CAWS with their lower aquatic life
15 use destinations would be at least the ten
16 micrograms per liter so they would not be
17 subject to more stringent control than the
18 local general use waterways. I couldn't
19 speculate on how much higher than ten
20 micrograms per liter that would be proof for
21 the CAWS, but I can say that based on our
22 waterways data, the CAWS would generally meet
23 that chronic cyanide standard if it were set
24 at ten.

1 Incidentally, in the rulemaking in
2 1995, what they did for the general use
3 waterways, originally the standard for
4 cyanide was 5.2 micrograms per liter. And,
5 as I said, those were based on some fish that
6 weren't in the CAWS. So they removed the
7 rainbow trout which was the most
8 cyanide-sensitive species and added the next
9 one in line and that's how they got the ten.
10 If you also remove the brook trout which
11 wasn't done for these general use waterways,
12 the number would be calculated actually at
13 10.9 micrograms per liter.

14 MS. WILLIAMS: Are you recommending
15 that the board adopt a ten microgram per
16 liter standard in this rulemaking?

17 MS. WASIK: Basically that's -- that
18 would be on par with the general use
19 waterways in Cook County, and I believe that
20 would, for the most part, be met in the CAWS.

21 MS. WILLIAMS: Is that yes?

22 MS. WASIK: Yes.

23 MS. WILLIAMS: Thanks. Will the
24 District be making a proposal for this

1 change?

2 MS. WASIK: Well, I consider this
3 testimony serves as our proposal.

4 MS. WILLIAMS: Thank you.

5 Question 3: The Agency's
6 proposal would allow for cyanide to be
7 analyzed as either the WAD, weak acid
8 dissociable or available cyanide forms. Do
9 you agree with this recommendation?

10 MS. WASIK: From a methodology
11 perspective, the WAD, W-A-D method is
12 preferred by the District, the District's
13 analytical laboratory over the available
14 cyanide analysis. And that's just from
15 speaking with someone from our analytical
16 department.

17 MS. WILLIAMS: I don't have any other
18 questions for Miss Wasik.

19 HEARING OFFICER TIPSORD: Miss --

20 MS. DEXTER: I don't have any --

21 MS. WASIK: There was a second part of
22 that question, and I just wanted to mention
23 that currently the MWRD uses the colorimetric
24 method, SM standard methods, 4500-CN for weak

1 acid dissociable, and the colorimetric EPA
2 335.3 method for total cyanide and we
3 currently report both.

4 HEARING OFFICER TIPSORD: Anything
5 else? Thank you, Miss Wasik.

6 MS. WASIK: Thanks.

7 HEARING OFFICER TIPSORD: That brings
8 us to Mr. Granato. Why don't we get up and
9 stretch our legs, since he'll read his
10 testimony, and come back in a couple of
11 minutes.

12 (Short break taken.)

13 HEARING OFFICER TIPSORD: If we can go
14 back on the record. Let's swear in
15 Mr. Granato.

16 (Witness sworn.)

17 HEARING OFFICER TIPSORD: And since
18 he's going to read his testimony, we don't
19 need to enter it as an exhibit.

20 MR. ANDES: I do have one other
21 document I would like to enter. It relates
22 to his testimony. And, particularly,
23 response to questions raised at an earlier
24 hearing. I don't -- it was on December 3rd

1 in the hearing. There were questions raised,
2 I believe, by Dr. Lin about dredging. So the
3 District prepared a paper which lays out its
4 thoughts regarding the dredging issue, and I
5 wanted to submit that for the record.

6 HEARING OFFICER TIPSORD: Thank you.

7 MR. ANDES: It's called Metropolitan
8 Water Reclamation Water District of Greater
9 Chicago's Response to Certain Questions from
10 December 3rd, 2008 hearing regarding
11 limitations for dredging the Chicago Area
12 Waterway System.

13 HEARING OFFICER TIPSORD: If there is
14 no objection, we will admit this as
15 Exhibit 231.

16 Seeing none, it's Exhibit 231.
17 And then whenever you're ready, Mr. Granato,
18 you can begin.

19 DR. GRANATO: Good afternoon. My
20 name is Thomas Granato, and I am the
21 assistant director of research and
22 development managing the environmental
23 monitoring and research division at the
24 Metropolitan Water Reclamation District of

1 Greater Chicago. I've already read my
2 credentials into the record during my
3 previous testimony in this case, so I'll
4 proceed with my testimony.

5 This testimony summarizes and
6 concludes each main topic of the District's
7 testimony with regard to aquatic life use and
8 criteria issues. The District believes that
9 IEPA relied on incorrect assumptions and
10 reached faulty conclusions concerning aquatic
11 life use designations and associated criteria
12 for the CAWS. Instead of pursuing this
13 rulemaking now, IEPA should wait for
14 necessary studies being conducted by the
15 District to be completed. These studies will
16 provide information necessary to make
17 scientifically-supported decisions concerning
18 appropriate water quality standards for the
19 CAWS. However, if the rulemaking does move
20 forward before those studies are completed,
21 the District urges significant revisions to
22 assure that the use designations and criteria
23 for the CAWS are technically and legally
24 supported.

1 Aquatic use summary and
2 conclusions: As an active stakeholder, the
3 District has appreciated the opportunity to
4 provide a majority of the environmental data
5 that has been assessed in the CAWS UAA.
6 Research projects and studies regarding the
7 UAA have been initiated by the District
8 either on our own accord or on the request of
9 IEPA. The District is concerned that IEPA
10 has filed its proposal for R08-9 before the
11 results of these crucial studies were
12 available. IEPA has chosen to formulate use
13 designations and propose standards for the
14 CAWS despite being aware that certain studies
15 they have requested have not been completed.

16 We feel strongly that the results
17 of all the studies conducted for or in
18 association with the UAA must be available
19 and assessed before IEPA can make informed
20 and scientifically supportable decisions
21 about the uses and standards that are
22 applicable to the CAWS. For parameters for
23 which there is little or no science
24 available, it would be counter-productive to

1 set arbitrary standards while we await the
2 results of ongoing research.

3 Related to the aquatic life
4 standards, the District's habitat evaluation
5 and improvement study will provides extensive
6 data on the physical habitat and the aquatic
7 life potential on the CAWS at many more
8 locations than were assessed in the UAA
9 report. Since 2001, the District has been
10 collecting biological and physical habitat
11 data throughout the CAWS on a four-year cycle
12 for ambient water quality monitoring program.
13 In other words, all 59 stations, 28 of which
14 are in the CAWS, are sampled within four
15 years. As the data were being analyzed from
16 the first two sampling cycles, it became
17 apparent that additional stations in the CAWS
18 should be evaluated to adequately
19 characterize the aquatic environment. This
20 habitat evaluation study will fill these
21 gaps, determine what physical habitat
22 modifications would be required to achieve a
23 sustainable fish community in the CAWS, and
24 also synthesize and compare district chemical

1 water quality data, the tolerance levels of
2 the fish species expected to colonize the
3 CAWS if habitat improvements were
4 implemented. This is necessary to replace
5 the approach that IEPA took which was based
6 on insufficient habitat and biotic index data
7 and which was derived from indices that are
8 not appropriate for use in the CAWS and which
9 were calculated incorrectly. The definition
10 and basis for the proposed aquatic life use
11 designations was never adequately explained
12 by the IEPA. One of the confusing aspects of
13 the CAWS UAA report is that it contains
14 language that is inconsistent with the
15 proposed standards. For instance, the CAWS
16 UAA report refers to the aquatic life use
17 designations in categories including modified
18 warm water aquatic life or MWAL, and limited
19 warm water aquatic life or NWAL. The
20 proposed life use designations, however, do
21 not explain these classifications nor do they
22 explain how they are related to aquatic life
23 Use A and B, terms that are introduced in the
24 UAA proposal for the CAWS. Between the 2004

1 CAWS UAA draft report and the 2007 issuance
2 of the final report, no new data were
3 assessed. Only the water quality, sediment
4 quality, and biological data described in the
5 UAA report was collected prior to or during
6 2002.

7 During 2001 to 2007 the
8 District has collected a wealth of sediment
9 chemistry, sediment toxicity, and benthic
10 invertebrate data in the CAWS as part of the
11 ambient water quality monitoring program.
12 However, none of the information was
13 considered when IEPA designated aquatic life
14 uses. Essentially it appears that only fish
15 index of biotic integrity or IBI percentile
16 was used to classify waterways into aquatic
17 life use A or B. Given the more extensive
18 database now available for sediment and
19 benthic invertebrates and the soon to be
20 completed CAWS habitat evaluation and
21 improvement study, the IEPA should consider
22 these factors and their implications for the
23 aquatic life use designations in the CAWS.

24 Furthermore, the Agency did not

1 adequately account for the unique
2 characteristics of the CAWS that
3 significantly differentiated from other
4 general use waters. Hydraulic limitations
5 such as flow reversal, slow water velocity
6 and the effects of wet weather present does
7 not challenge -- is not faced by most natural
8 water bodies. The ecological community in
9 the CAWS also is substantially impaired by
10 poor habitat, including low quality
11 substrate, little or no sinuosity, poor
12 riffle and pond development, and low
13 gradients. The CAWS substrate alone will
14 prevent any further improvements in water
15 quality from translating to a better macro
16 invertebrate community and will not likely
17 result in improvements in aquatic life use.
18 Without suitable habitat pattern and
19 diversity, sustainable aquatic populations
20 will not be established even with
21 improvements in water quality. If this
22 rulemaking moves forward despite the data
23 gaps, the aquatic life uses should be revised
24 to more appropriately reflect the nature of

1 the CAWS and the aquatic community to be
2 protected. For example, the Calumet-Sag
3 Channel, which is a deep draft, steep-walled
4 channel, should be classified with other deep
5 draft, steep-wall channels in Aquatic Life
6 Use B. Bubbly Creek, which is stagnant
7 during dry weather and inundated with
8 combined sewer overflows from the Racine
9 Avenue Pump Station during wet weather does
10 not reasonably fit within either of IEPA's
11 proposed aquatic life uses. Bubbly Creek is
12 unique in that it is a site for and is,
13 therefore, not used for fish passage through
14 the Chicago area waterway system. To this
15 end, the District recommended a narrative DO
16 standard for Bubbly Creek that prevents fish
17 kills and maintains aesthetics. For example,
18 prevents nuisance odors. This would be
19 appropriate until such time as the sediments
20 are capped, removed, or remediated, and the
21 frequency of discharge at Racine Avenue
22 Pumping Station is diminished sometime after
23 2024. If the numerical DO standard is deemed
24 imperative, then the IPCB should consider the

1 testimonies of Drs. Paul Friedman and
2 Marcello Garcia as a basis for such a
3 standard.

4 Aquatic criteria, summary and
5 conclusions: The District is very concerned
6 that the IEPA's proposal establishes
7 standards to protect aquatic life that are
8 inappropriate for the proposed uses in the
9 CAWS and which would require the expenditure
10 of significant resources to implement flow
11 augmentation and supplemental aeration
12 projects that ultimately could not guarantee
13 achievement of the proposed standards. We,
14 therefore, urge the Board not to adopt the
15 Agency's proposal. Despite the unique highly
16 managed, manmade characteristics of the CAWS
17 and despite IEPA's implication that the
18 aquatic life uses are designed to protect
19 tolerant or intermediately tolerant species,
20 the Agency has proposed criteria that are
21 virtually identical to those applicable to
22 general use waters in the case of dissolved
23 oxygen and are more stringent than general
24 use waters in Cook County for cyanide. This

1 is not reasonable because the general use
2 standards apply to natural waters where
3 intolerant, sensitive species must be
4 protected. The Agency proposed that aquatic
5 life use A waters be required to meet
6 standards proposed to protect early life
7 stages of fish such as small mouth bass which
8 cannot succeed in the CAWS due to lack of
9 appropriate habitat. The Agency's proposed
10 cyanide standard was based on protection of
11 cold water species such as rainbow trout
12 which are not present in the CAWS. Without a
13 clear link between the standards and
14 protection of appropriate organisms, the
15 Agency's proposal is not justified.

16 While the Agency has applied
17 the general use numerical criteria to the
18 CAWS, it has failed to also apply the
19 narrative dissolved oxygen standard that was
20 recently adopted for general use waters to
21 the CAWS. The Agency gave no consideration
22 for developing a similar standard for the
23 inherently quiescent reaches of the CAWS.
24 The Agency stated in the recently adopted

1 general use waters rulemaking that it is not
2 reasonable to expect to attain a dissolved
3 oxygen standard that was set for general use
4 waters everywhere, and that there are
5 isolated areas where the physical and
6 chemical and biological circumstances are
7 such that you cannot maintain the standard.
8 As a result, the dissolved oxygen criteria
9 proposed by IEPA would require implementation
10 of flow augmentation and supplemental
11 aeration projects even in isolated areas of
12 the outside that are quiescent due to their
13 physical circumstances. However, even if
14 implementation of these projects could be
15 accomplished in all areas of the CAWS, the
16 Agency has provided no direct evidence that
17 the proposed criteria could be achieved. The
18 Agency particularly failed to consider the
19 prolonged effects of wet weather and
20 dissolved oxygen levels in all parts of the
21 CAWS, particularly in Bubbly Creek. If this
22 rulemaking proceeds, the proposal should be
23 revised to incorporate wet weather standards
24 and eliminate the seven-day average dissolved

1 oxygen criteria. In addition, the chronic
2 cyanide criterion should be revised to
3 reflect protection of species actually
4 present or intended to be present in the
5 CAWS. The resulting chronic cyanide standard
6 that is developed for the CAWS should not be
7 more restrictive than the general use
8 standard currently applicable to Cook County.

9 Finally, the District has
10 serious concerns about the feasibility and
11 the significant cost of such an uncertain
12 undertaking. It certainly is not practicable
13 to install supplemental aeration stations of
14 the size necessary to achieve 100 percent
15 compliance with the proposed dissolved oxygen
16 criteria and still maintain certain
17 recreational uses in and around some parts of
18 CAWS.

19 For example, to build a
20 diffused air instream aeration station at the
21 rivers' DO to meet the proposed DO standards
22 could require installing diffusers in an area
23 the length of a football field in which the
24 rising air bubbles in the water could make

1 criteria would result in substantial
2 environmental impacts in the form of energy
3 usage, air emissions, including greenhouse
4 gasses from power generation and
5 transportation of raw and waste materials and
6 land usage.

7 For example, the total energy
8 required for operation of dissolved oxygen
9 enhancement technologies is estimated at 74.2
10 million kilowatt hours per year which will
11 increase the District's total energy
12 consumption by 13.5 percent. These
13 environmental impacts must be taken into
14 consideration in determining appropriate
15 requirements.

16 Conclusion: In conclusion,
17 the CAWS was created largely by the District
18 for purposes other than sustaining aquatic
19 life use long before the Clean Water Act was
20 conceived or passed in the law.

21 Nevertheless, the District has expanded
22 considerable -- has expended considerable
23 resources and has undertaken many ambitious
24 engineering projects such as building some of

1 the world's largest wastewater treatment
2 plants and developing and implementing TARP
3 to improve water quality in the CAWS. These
4 water quality improvements will no doubt
5 continue as TARP is completed. The District
6 shares the goal of its fellow UAA
7 stakeholders to continually improve Chicago's
8 aquatic environment, both the CAWS and Lake
9 Michigan. However, the District cannot
10 support the proposal that the IEPA has put
11 before you in this rulemaking. That proposal
12 has focussed solely on addressing further
13 improvements in chemical water quality,
14 requires higher dissolved oxygen
15 concentrations, and lower concentration of
16 many chemical constituents than are currently
17 required and has ignored the many inherent
18 physical limitations that case gas which
19 prior testimony has shown will prevent
20 chemical water quality improvements that the
21 Agency seeks from supporting improved aquatic
22 life use; that the potential cost of
23 compliance measured in the hundreds of
24 millions of dollars, standards that are based

1 on incomplete, inappropriate or incorrect
2 data are unacceptable.

3 I appreciate the opportunity
4 to present this testimony today and encourage
5 the Board to reject IEPA's proposal as
6 premature without sufficient scientific
7 basis, unattainable, and inappropriate to
8 protect the CAWS.

9 HEARING OFFICER TIPSORD: Thank you,
10 Mr. Granato. IEPA, I believe had some
11 questions?

12 MS. WILLIAMS: Question 1: What
13 aquatic life use studies should the Board
14 wait for before completion of this
15 rulemaking, and when will they be completed?

16 DR. GRANATO: Basically there are a
17 number of studies that are underway. They've
18 been discussed through previous testimony of
19 Dr. Mackey, Dr. Zenz, Dr. Garcia, and others.
20 And they include first the habitat evaluation
21 improvement study. This study is anticipated
22 to be completed by September of 2009
23 including peer review of the study findings.
24 We feel that it's critical that the Board

1 wait for this study which will provide
2 appropriate metrics, will provide
3 comprehensive data which is currently missing
4 from the proposal that IEPA has put before
5 you, will tie together and synthesize all the
6 information and the metrics in a systematic
7 and well-documented fashion that will make it
8 very clear the basis upon which aquatic life
9 uses and protective standards should be
10 based. It will provide an expansion of the
11 sampling stations and observation stations
12 across the CAWS as was explained by
13 Dr. Mackey which will be necessary to
14 appropriately evaluate the current habitat
15 limitations to the aquatic life use.

16 The second study is the
17 ambient water quality monitoring program.
18 This program was initiated in 2001 and is the
19 study that generates the data that the
20 habitat study largely was based upon. As I
21 mentioned in my testimony, it's conducted in
22 four-year cycles. Every four years we have a
23 complete sampling of all the stations in the
24 CAWS. There was hope that we would complete

1 two four-year cycles as the basis for our
2 habitat study. And as of 2008, all the field
3 sampling was completed in those two rounds
4 and the data largely available, and I believe
5 had been put in the record; much of it has
6 been put in the record.

7 Next study is what we're
8 referring to as the integrated water quality
9 strategy for the CAWS. As was mentioned
10 earlier today by Dr. Zenz, it's anticipated
11 that this study will be completed by October
12 of this year. This study integrates all the
13 previous individual study findings. It
14 provides enhanced level of accuracy due to
15 model enhancements. It is -- provides a more
16 comprehensive look at the entire waterways
17 rather than the isolated segments that were
18 studied in the preliminary UAA studies. And
19 it should provide the best available estimate
20 of the most efficient and cost-effective
21 solutions to meeting the water quality
22 standards. It will also provide the Board
23 with a greater sense of the feasibility of
24 meeting the proposed standards with existing

1 technologies.

2 Environmental and economic impact
3 assessments, these studies were also
4 presented in testimony today. It's
5 anticipated that the final studies will be
6 completed in January of 2010 after completion
7 of the integrated water quality strategy on
8 which they are based. And these studies will
9 provide the Board the best available estimate
10 of economic impacts on the District as well
11 as environmental impacts such as power
12 consumption and greenhouse gas emissions that
13 will be incurred through the proposed
14 regulations.

15 And then, finally, the CAWS 3D,
16 three dimensional or 3D modeling study of
17 Dr. Garcia's. We heard testimony on that
18 previously. Phase 1 of the study covers
19 Bubbly Creek, all of the south branch and the
20 sanitary and ship canal at Cicero Avenue and
21 a small segment of the north branch at the
22 main stem. Essentially the areas that we saw
23 this morning had the most intensive location
24 of supplemental aeration stations we saw on

1 an exhibit this morning. It's anticipated
2 that that will be completed sometime around
3 April of next year and will be available for
4 use. And this study is necessary for further
5 evaluation and more detailed evaluation of
6 impacts of sediment on water quality dynamics
7 in Bubbly Creek in the lower Chicago River
8 system as well as the other complex features
9 of the CAWS such as bidirectional flow and
10 influence of side channels, et cetera, which
11 are not accounted for in the Marquette model
12 and the due flow model. Again, that was
13 discussed earlier this morning.

14 MR. ANDES: If I can follow up on
15 that, just one quick question. Dr. Granato,
16 as those reports become available, I assume
17 the District will follow those with the
18 Board?

19 DR. GRANATO: Yes, that's correct,
20 Fred. Our intention is to, as reports become
21 available, to make them available to the
22 Board. And it's our hope that we can provide
23 testimony on those studies and their impact
24 on the rulemaking.

1 MS. WILLIAMS: Question 2: When did
2 the District decide to conduct its habitat
3 evaluation and improvement study?

4 DR. GRANATO: Okay. The District
5 basically -- let me back up and give a
6 history. The District undertook the ambient
7 water quality monitoring program --

8 MS. WILLIAMS: I don't have a problem
9 with him giving the history. Can we just
10 answer the question, though, first. When did
11 the District decide to conduct this habitat
12 evaluation improvement study? Can you just
13 answer that before you go backwards?

14 DR. GRANATO: Well, I'd say the study
15 that's actually underway, we decided to
16 conduct that sometime in 2006. And basically
17 get back to what I was saying, is that
18 basically the District to undertake the
19 ambient water quality program in 2001 and the
20 intention -- the Agency was aware that we
21 were undertaking that in part to support the
22 UAA process. The thought was that at some
23 point after significant cycles of that
24 program were completed and sufficient data

1 existed, that the District would synthesize
2 that data and utilize that data to assess
3 aquatic life use in the CAWS and determine
4 limitations that existed both in the habitat
5 and water quality, at such time that it
6 became apparent that the IEPA's rulemaking
7 was deficient in -- both in terms of content
8 and structure on providing such analysis, the
9 District expedited the initiation of that
10 study, and that's why we see the onset of it
11 in 2007 prior to the ambient water quality
12 program completing two cycles of data
13 collection.

14 MS. WILLIAMS: Is it your testimony
15 that the District informed the Agency of the
16 need for the habitat evaluation and
17 improvement study during the stakeholder
18 process?

19 DR. GRANATO: I didn't say that. And
20 I'm not aware of whether the District
21 informed the Agency or not. I know the
22 District did inform the Agency that it was
23 undertaking the ambient water quality
24 monitoring program. And it's a logical

1 extension, in my mind, that data that was
2 being collected would have to be analyzed and
3 used. And you can call it whatever you want,
4 but it would be in a fashion that would be
5 equivalent to what's being done now in the
6 habitat improvement project, habitat
7 evaluation and improvement study.

8 MS. WILLIAMS: On Page 3 you
9 explain -- this is from Question 4. You
10 explain that additional information has been
11 collected by the District from 2001 to 2007
12 that was not incorporated into the use
13 attainability analysis. Has the data from
14 2001 to 2007 collected by MWRDGC been
15 provided to the Board for the record?

16 DR. GRANATO: Yes. The District has
17 submitted 2001 to 2007 data for fish
18 collection habitat evaluation, sediment
19 toxicity and chemistry, and 2001 to 2005 data
20 for benthic invertebrate collection into the
21 record. And the 2006 and 2007 benthic
22 invertebrate data have recently become
23 available and can also be submitted into the
24 record. All of this data, by the way, is

1 going to be incorporated in addition to the
2 additional data that we're collecting under
3 the habitat study will all be included and
4 incorporated in a graphical information
5 system that's resulting from a habitat
6 project for more effective analysis.

7 MS. WILLIAMS: What is the basis for
8 the statement in your testimony on Pages 3 to
9 4 that, quote, essentially it appears that
10 only fish index of biotic integrity
11 percentile was used to classify waterways
12 into aquatic life use A or B. What role do
13 you believe physical habitat played in the
14 determination?

15 DR. GRANATO: Well, this was covered
16 by Dr. Mackey in some detail. Basically the
17 basis for my statement in my testimony that
18 IBI data were used as the basis is the -- and
19 I guess I want to back up and just say that
20 determining the basis on which IEPA developed
21 their aquatic life use tiers or categories,
22 the methodology they used to assign those,
23 and the methodology they used to develop
24 protective standards for those uses is

1 largely unclear even at this time, even after
2 all these hearings, all these rounds of
3 hearings and testimony that we've received.
4 I think it was clear during the first rounds
5 of testimony that there was not a clear,
6 well-documented methodical approach presented
7 upon which real precise answers to this
8 question could be based. But the little bit
9 of insight that is provided on the record,
10 and I would fall back to the UAA report. And
11 on Page 5-8 of Figure 5-2 in the report, it's
12 very clear that the IBA scores and the
13 distribution across the CAWS formulated the
14 basis for defining -- functionally defining
15 the aquatic life use A and B categories in
16 the rulemaking. And it then appears that
17 arbitrarily those break points that were
18 based on 75th percentile IBI scores were
19 matched up with QHEI scores which are the
20 habitat -- basically the habitat component of
21 the analysis to determine how to assign the
22 aquatic life uses, the various reaches in the
23 waterway.

24 MS. WILLIAMS: Question 8: Please

1 explain what you mean when you state that the
2 Agency, quote, "Has failed to also apply the
3 narrative dissolved oxygen standard that was
4 recently adopted for general use waters to
5 the CAWS. Please specify which provisions in
6 the board's general use oxygen standard are
7 not included and would be applicable in the
8 CAWS or should be applicable in the CAWS."

9 DR. GRANATO: Okay. Well, in the
10 case of the aquatic use standards proposed
11 for the CAWS, IEPA without exception applied
12 all of the numeric standards for general use
13 waters to CAWS. This is true for pH, metals,
14 ammonia, cyanide, and even aspects of the DO
15 standard, but neglected to acknowledge the
16 presence of quiescent and isolated reaches of
17 the CAWS as it did for general use waters.
18 Specifically IEPA did not include in its
19 R08-9 proposal a provision comparable to
20 302.206A. And that provision, 302.206A
21 specifies that general use waters at all
22 locations must maintain sufficient dissolved
23 oxygen concentrations to prevent offensive
24 conditions as required in Section 302.203 of

1 this part. Quiescent and isolated sectors of
2 general use waters including, but not limited
3 to wet lands, sloughs, back waters, and
4 waters below the thermal climb in lakes and
5 reservoirs must be maintained at sufficient
6 oxygen concentrations to support their
7 natural ecological functions in resident
8 aquatic communities.

9 MS. WILLIAMS: Is it your opinion,
10 Mr. Granato, that that language would be
11 sufficient? If that same language was
12 incorporated into this proposal, would that
13 satisfy the District's concerns?

14 DR. GRANATO: I don't think I'm
15 prepared at this time to offer a comment as
16 to whether that would be sufficient. I think
17 we have to complete the habitat study and
18 carefully evaluate the findings in terms of
19 aquatic populations that would be expected to
20 be protected and the needs. And at that time
21 an appropriate narrative could be formulated.

22 MS. WILLIAMS: And at that time will
23 it be formulated by the District as a
24 proposal to the Board?

1 DR. GRANATO: I imagine so.

2 MR. ANDES: I think it's safe to say
3 that this issue will be addressed when the
4 District provides further testimony after the
5 habitat study is done.

6 MS. WILLIAMS: So I'm not sure if
7 we've answered Question 9 or not. Please
8 describe the narrative dissolved oxygen
9 standard you envision for south fork of south
10 branch Chicago River, and would it apply to
11 other reaches of the CAWS as well? I'm just
12 not quite sure when you read that language
13 from the general use standard, was that
14 specifically targeted towards concerns about
15 both Bubbly Creek or --

16 DR. GRANATO: Well, I think, as I
17 said, I'm not prepared to offer specific
18 language for the CAWS. I offered the
19 language for the general use provision as
20 illustration of what has been already been
21 adopted. But basically that would be
22 formulated following, as I stated, the
23 habitat study. The narrative should be
24 applicable to both Bubbly Creek and to --

1 I'm going to read this quote from Page 2.
2 "However, if the rulemaking does move forward
3 before those studies are complete, the
4 District urges significant revisions to
5 assure that the use designations and criteria
6 for the CAWS are technically legally
7 supportable."

8 Could you please summarize for
9 us today, Dr. Granato, what are those
10 revisions that you're referring to in this
11 sentence?

12 DR. GRANATO: Okay. Well, basically
13 I'll talk in generalities, I guess --

14 MS. WILLIAMS: Well, I'd actually
15 really like you to be specific, but as
16 specific as you can.

17 MR. ANDES: I would say on Page 6 of
18 his testimony he specifically identified
19 changes. Basically in his summary and
20 conclusions on Pages 5, 6, and 7, he's been
21 very clear about what changes would be made
22 if it moves forward.

23 MS. WILLIAMS: I mean I don't think
24 that's specific. If you can answer in a

1 summary form, otherwise I can go through and
2 ask more specifics about those pages of your
3 testimony. But if you can give us a list of
4 the major areas of revision you would be
5 recommending, I think it would be helpful to
6 everyone.

7 DR. GRANATO: Sure. I'll try to do
8 that. Basically we heard testimony -- I'm
9 going to refer to other testimony since I'm
10 summarizing.

11 MS. WILLIAMS: That's fine.

12 DR. GRANATO: We've heard testimony
13 regarding what we feel is inappropriate use
14 designation for Cal-Sag Channel which was
15 placed in the aquatic life use A category.
16 And, again, if we had to move forward at this
17 time it should at least be in the same
18 category B with the other deep draft
19 steep-wall channels. Bubbly Creek is such a
20 unique water body, it really doesn't fit into
21 either of the tiers that are currently
22 proposed: A or B and the entire waterway is
23 wet weather challenged. So there needs to be
24 an acknowledgment and -- more than an

1 acknowledgment, an acknowledgment in terms of
2 the structure of the proposal to accommodate
3 the wet weather challenges of the system
4 which are currently completely devoid. There
5 also has been testimony presented as to the
6 inappropriately, I'll say inappropriately
7 similar DO standards to general use that were
8 proposed for the CAWS given the stark
9 differences in the habitat and features of
10 CAWS compared to natural waterways and the
11 expectation of supporting a less sensitive
12 tolerant aquatic life community does not
13 appear that given the precedent around the
14 country of other systems that have been
15 evaluated and found to require lower DO
16 standards that CAWS in this proposal received
17 the standards that are proposed.

18 Those are -- and also the
19 cyanide standard should be set at ten
20 milligrams per liter or higher.

21 MS. WILLIAMS: Do you mean micrograms?

22 DR. GRANATO: Micrograms, yes.

23 MS. WILLIAMS: And at this point I
24 would just like to say for the record, I mean

1 the first item you mention changing the
2 designation of Cal-Sag Channel to use B, and
3 the last item you mentioned cyanide of ten
4 micrograms per liter I think are very helpful
5 concrete recommendations from the District.

6 MR. ANDES: Did you characterize the
7 witness's testimony at this point? What's
8 the question?

9 MS. WILLIAMS: If you don't -- I can
10 continue if you don't want me to say that
11 he's helpful.

12 MR. ANDES: Well, you were about to
13 say something isn't helpful, so.

14 MS. WILLIAMS: I'll just go back to my
15 questions. That's fine.

16 Question 10: What is the
17 basis for suggesting on Page 6 of your
18 testimony that the Agency should have a wet
19 weather standard or eliminate the seven-day
20 average with regard to dissolved oxygen? Why
21 do you suggest eliminating the seven-day
22 average proposed by Illinois EPA?

23 DR. GRANATO: Okay. Well, first let
24 me shuffle my papers. Could you repeat the

1 question. I was shuffling my papers.

2 MS. WILLIAMS: What is the basis for
3 suggesting on Page 6 of your testimony that
4 the Agency should have a wet weather standard
5 or eliminate the seven-day average with
6 regard to the dissolved oxygen standard? Why
7 do you suggest eliminating the seven-day
8 average proposed by Illinois EPA? I can
9 finish reading the other parts of that
10 question if you want. Would the dissolved
11 oxygen standard still be protective of the
12 aquatic community without a seven-day average
13 and would it be consistent with the US EPA
14 National Criteria Document? What do you base
15 your conclusion on?

16 DR. GRANATO: I guess I would just
17 start by clarifying that in my testimony I
18 suggested that the Agency have a wet weather
19 standard and eliminate the seven-day average
20 rather than core eliminate it. The basis for
21 the suggestion is that the standards that are
22 proposed for both aquatic life use A and B
23 and CAWS were intended to protect these uses
24 and are, in fact, not attainable during wet

1 weather. This is true of both the daily
2 minimum and the seven-day average of daily
3 minimum. So essentially --

4 MS. WILLIAMS: So your testimony is it
5 should be eliminated because it's not
6 attainable during wet weather?

7 DR. GRANATO: Well, it's not
8 attainable and --

9 MR. ANDES: Well, to clarify, two
10 separate issues. I believe one is should the
11 Agency have a wet weather standard, and he's
12 first explaining why that's the case. The
13 second issue is whether the seven-day average
14 should generally be eliminated.

15 MS. WILLIAMS: Okay. That wasn't
16 clear to me from his answer. Go ahead. I
17 understand better now that Fred explained it.

18 DR. GRANATO: Okay. So your
19 question, why do you suggest eliminating the
20 seven-day average proposed by Illinois EPA.
21 And basically the seven-day average daily
22 minimum which appears in IEPA's proposal for
23 both aquatic life use A and B, it's 4.1
24 milligrams per liter is identical to the

1 seven-day average of daily minimum that was
2 recently adopted for general use waters of
3 the state considering that this limit is
4 included to reduce chronic low DO production
5 limitations which seems appropriate in
6 general use waters, some of which are
7 important fishery resources. It does not
8 make sense for the CAWS where production is
9 severely limited by habitat including poor
10 food source such as very limited benthic
11 invertebrate community and lack of aquatic
12 vegetation. Dr. Mackey earlier testified to
13 the limited primary productivity and degraded
14 macroinvertebrate community in the CAWS. And
15 I believe it's been mistakenly included in
16 the proposal for the CAWS.

17 MS. WILLIAMS: So you do believe that
18 the standards will be protective of the
19 attainable aquatic community without the
20 seven-day average?

21 DR. GRANATO: Yes, I do.

22 MS. WILLIAMS: And you believe that
23 the standard would be consistent with the
24 U.S. EPA National Criteria Document without

1 the seven-day --

2 DR. GRANATO: Without the seven-day,
3 yes, I do.

4 MR. ANDES: Explain it.

5 DR. GRANATO: Shall I elaborate on
6 that? Basically the approach is consistent
7 with the criteria document. Our
8 understanding from Page 29 of the document is
9 that the seven-day average of daily minimum
10 is meant to be protective of long-term
11 persistence of DO minimal, to protect
12 sensitive populations under natural
13 conditions. CAWS does not support sensitive
14 populations and does not offer natural
15 conditions. And precedent exists in many
16 states for standards that are set other than
17 criteria listed in Table 8 of Attachment X
18 which is the EPA DO criteria document. Some
19 of these precedents have been presented to
20 the Board, previous testimony by Paul
21 Friedman and Adrienne Nemura and others. And
22 among the examples we heard about were the
23 Cuyahoga River and the Mecapsical (ph.)
24 Harbor.

1 MR. ANDES: Can you also explain, I'm
2 not sure the other part Miss Williams raised
3 was would the DO standards still be
4 protective without the seven-day mean of
5 daily minimum?

6 DR. GRANATO: Yes. I can elaborate on
7 that. Basically dissolved oxygen standards
8 proposed for the CAWS will still be
9 protective without a seven-day mean of daily
10 minimum. And this is because chronic low DO
11 which occurs in some isolated areas of the
12 CAWS is largely associated with lingering
13 effects of wet weather and/or with inherent
14 stagnation, does not appear to be a limiting
15 factor of production in the CAWS. The
16 habitat study currently being conducted will
17 address this. Other highly modified systems
18 had existing aquatic life use standards that
19 are lower than those proposed for the CAWS
20 and without mean criteria. And, again, one
21 example is the Cuyahoga River Ship and
22 Channel. And Adrienne Nemura and Paul
23 Friedman provided other examples.

24 MS. WILLIAMS: I believe Miss Nemura

1 and Mr. Friedman were unwilling to recommend
2 a specific wet weather standard to the board
3 that they thought to be appropriate for
4 dissolved oxygen. Are you in a position to
5 recommend a wet weather standard to the
6 Board?

7 DR. GRANATO: Not at this time, no.

8 MS. DIERS: Dr. Granato, this is
9 Stephanie Diers of the Illinois EPA. Is this
10 something we can anticipate being presented
11 in the future by the district, language for a
12 wet weather standard once all the studies are
13 completed and more testimony presented?

14 DR. GRANATO: Yes. I believe we will
15 present something.

16 MS. WILLIAMS: With the elimination --
17 with the exception, I should say, with the
18 exception of the seven-day mean of daily
19 minima of 4.0 milligrams per liter, does the
20 District support the remaining numeric
21 standards proposed contained in the Agency's
22 dissolved oxygen proposal for these waters?

23 DR. GRANATO: In the absence of the
24 habitat study, I would have to say no, we

1 don't support them. The 5.0 standard which
2 is -- seems to be based on protecting early
3 life stages does not have adequately
4 demonstrated basis in terms of presence of
5 early life stages that require protection.
6 And the 3.5 daily minima standard is higher
7 than the national criteria standard of 3.0
8 which is recommended for natural balance warm
9 water systems.

10 MS. WILLIAMS: And I'm assuming,
11 though, that the answer is the same as you
12 just provided to Miss Diers that a
13 comprehensive numeric criteria proposal from
14 the District is forthcoming at some point.

15 DR. GRANATO: We would like very much
16 to be able to do that following the
17 completion of our studies.

18 MS. WILLIAMS: How long following the
19 completion do you think it would take the
20 District to prepare that type of proposal?

21 MR. ANDES: If I can help answer that.
22 I think that the reports will be filed with
23 the Board on completion, and I think at that
24 point the District would propose a timeline

1 in terms of providing further testimony.
2 Hard to say until the report is complete.
3 But --

4 MS. WILLIAMS: So the District will be
5 proposing when additional testimony should
6 come in?

7 MR. ANDES: We'll follow suggestion at
8 that point in terms of the time.

9 MS. WILLIAMS: Question 11: What are
10 the District's plans for removing or capping
11 sediment in the south fork of the south
12 branch Chicago River?

13 DR. GRANATO: The District currently
14 has no plans to cap or remove sediment in the
15 south branch of the south fork -- excuse
16 me -- the south fork of the south branch of
17 the Chicago River.

18 MS. WILLIAMS: Just let me have a
19 second. That wasn't the answer I was
20 expecting.

21 MR. ANDES: I think, if I can help on
22 that. I believe there was a study being
23 conducted currently by the Corps of Engineers
24 with a limited capping project in the turning

1 basin, and maybe that's what you're thinking
2 about. That's not a District -- not a
3 district study, and there are no plans by the
4 District. We are aware, and I think
5 Dr. Granato can talk about the district being
6 aware of that study and monitoring it.

7 MS. WILLIAMS: Why don't you go ahead,
8 Mr. Granato, and remind us of what study
9 you're aware of.

10 DR. GRANATO: Well, as Fred just said,
11 there is a study ongoing, I believe it's a
12 feasibility study being undertaken. And the
13 UA Army Corps in collaboration with UIC is --
14 part of that study they're looking at what
15 they're terming captive capping of sediments
16 in the turning basin. They're also studying
17 various other remedial options. That project
18 is really in nascent phases, and it will be
19 quite some time. I don't have off the top of
20 my head the exact timetable that they're
21 operating under, but if I had to venture a
22 guess, it would be years before they have
23 a -- some type of a recommendation,
24 feasibility recommendation.

1 MS. WILLIAMS: And what about --
2 because you were talking about the turning
3 basin on the north branch.

4 DR. GRANATO: No. This is the -- at
5 the mouth of Bubbly Creek there's a turning
6 branch.

7 MS. WILLIAMS: I'm sorry. Right.
8 Then is there another product in the
9 collateral channel that we may have
10 discussed?

11 DR. GRANATO: That's a separate
12 project. It does involve capping in the
13 sense of constructing a wetlands at the north
14 end of the channel.

15 MS. WILLIAMS: And you're not aware of
16 any other projects that you are discussing
17 with the Agency for sediment capping?

18 DR. GRANATO: With the IEPA?

19 MS. WILLIAMS: Of the south fork, yes.

20 DR. GRANATO: No, I'm not.

21 MS. WILLIAMS: Okay. Question 13: On
22 Page 8, Paragraph 1 of your aquatic life use
23 testimony, you state that the Agency, quote,
24 "Has ignored the many inherent physical

1 limitations that CAWS has which prior
2 testimony has shown will prevent the chemical
3 water quality improvements that the Agency
4 seeks from supporting improved aquatic life
5 use," end quote. Subpart A, what physical
6 limitations are you referring to and which
7 chemical improvements are you referring to?

8 DR. GRANATO: Okay. I've prepared a
9 list here. Regarding the physical
10 limitations, first CAWS has -- is typically
11 steep vertical rock, compact earth or sheet
12 pile walls which produces a condition where a
13 lack of shallows and emergent vegetation in
14 bank edge habitat and riparian cover largely
15 lacking. There's a lack of prevalence and
16 appropriate juxtaposition of spawning nursery
17 and forage habitats as pointed out by
18 Dr. Mackey. The channel bed typically is
19 either devoid of substrate, it's flat, or is
20 on a rock bottom or extensively covered with
21 thick silky contaminated sediments that can
22 exert appreciable oxygen. This lack of
23 suitable substrate and substrate diversity
24 for healthy benthic communities will limit

1 containment of higher aquatic life use. UAA
2 report at Page 5-8 states the use of MBI was
3 not included to screen and develop aquatic
4 life use designations due to limited data
5 available for benthic macroinvertebrates in
6 CAWS. Then there's a high volume of
7 commercial navigation and large power boat
8 traffic that creates wakes that disrupt what
9 very limited bank habitat exists and
10 continuously resuspends sediments. This
11 constantly disrupted shore line environment
12 results in the lack of sheltered habitat
13 necessary for development of early life
14 stages. Complete channelization with no
15 overflow or flood plane connection or lack of
16 very physical habitat necessary to support
17 healthy diverse aquatic communities results
18 from this. Lack of instream habitat cover
19 and diversity and riparian habitat is
20 virtually absent in the CAWS. It is very low
21 gradient flow under dry weather conditions
22 with some areas of nearly total stagnation.
23 Reaches are inherently unable to reaerate.
24 Some stagnation co-exists with the highest

1 quality habitat on the Upper North Shore
2 Channel, and IEPA neglected to address this
3 inherent feature of CAWS. There's no
4 stagnant flow acknowledgment in the standards
5 resulting in limitations to DO standard
6 attainment. The CAWS watershed has a high
7 degree of imperviousness, greater than 45
8 percent for Cook County. And CAWS was
9 designed and created to convey urban drainage
10 away from Lake Michigan resulting in high wet
11 weather inflow. The result of this is POD
12 from inflow and resuspended sediments poses
13 limitation to DO standard attainment not
14 evaluated by IEPA. CAWS are hydraulically
15 controlled resulting in very rapid changes in
16 water level and flow in anticipation of and
17 response to rain events. These rapid changes
18 are hard for aquatic life to adapt to, and
19 the CAWS has been testified to by
20 Dr. Dennison. They cause basically a
21 sweeping or flushing of benthic populations
22 through the system, make it very difficult
23 for establishment. DO fluctuations do not
24 follow the normal diel patterns, but rather

1 respond to sediment dynamics and wet weather
2 inflow. DO depressions do not occur daily or
3 uniformly across CAWS, more extreme
4 depressions are sure to live and depressions
5 of lower magnitude rendering DO criteria
6 developed for natural systems of questionable
7 applicability.

8 IEPA applied habitat metrics
9 to CAWS that were not appropriate for the
10 unique system. This led to faulty assessment
11 of aquatic life use potential. And basically
12 the chemical improvements I referred to are
13 the proposed changes to the DO and chemical
14 standards in the CAWS in which general use
15 standards were proposed despite the habitat
16 being capable of supporting a healthy diverse
17 biological community.

18 MS. WILLIAMS: Haven't the proposed
19 use designations for the CAWS taken these
20 limitations into account by proposing aquatic
21 life uses that did not represent attainment
22 of a Clean Water Act aquatic life use goal?

23 DR. GRANATO: Well, to some extent
24 they've been taken into account in evaluating

1 the six UAA factors and in determining that
2 the factors apply to the CAWS and justifying
3 designations that are lower than full Clean
4 Water Act goal fishable. But they were not
5 taken into account in terms of proposing
6 standards that were attainable for the system
7 or setting aquatic life uses that
8 realistically describe the potential -- the
9 biological potential of the waterway.

10 MS. WILLIAMS: If the reversible human
11 impacts in the CAWS are mitigated will the
12 remaining physical limitations prevent
13 attainment of the proposed aquatic life uses?
14 What do you base your answer on?

15 MR. ANDES: Can we get that clarified
16 in terms of what are reversible human impacts
17 that are being discussed here?

18 MS. WILLIAMS: I think we're looking
19 for the District's opinion about which human
20 impacts are reversible in asking that
21 question.

22 DR. GRANATO: Well, given that the
23 entire system is either manmade or very
24 significantly human altered with intensive

1 development in, say, anthropogenic
2 development in the watershed, there's very
3 little that can really be reversed in the
4 system. That's our opinion, and that will be
5 valued in the habitat study more carefully.

6 So to answer the question, I
7 guess if a little reversible -- if the
8 little -- what am I trying to say? If the
9 limited impacts that can be reversed are
10 reversed, it will not mitigate the physical
11 limitations that currently exist that prevent
12 the CAWS from attaining proposed aquatic life
13 uses.

14 MS. WILLIAMS: Okay. On Page 7 of
15 your testimony, you raise the issue of
16 conflicting uses between supplemental
17 aeration and flow augmentation and
18 recreational uses. Which use should have
19 priority in such a conflict?

20 DR. GRANATO: Well, basically my
21 thought on that is it's setting priorities
22 for uses as a matter of resource management
23 policy. Risks and costs resulting from
24 conflicting resource uses must be considered

1 in formulating that policy. At this time the
2 risk to recreate as you paddle across or
3 capsize in an aeration zone where there is
4 increased turbulence and reduced buoyancy has
5 not been evaluated. But it is sure to be
6 greater than recreating in the absence of
7 aeration stations.

8 MS. WILLIAMS: I'm sorry. Could you
9 repeat the last sentence?

10 DR. GRANATO: Last sentence? At this
11 time the risk to recreators who paddle across
12 or capsize in an aeration zone where there is
13 increased turbulence and reduced buoyancy has
14 not been evaluated, but it is sure to be
15 greater than recreating in the absence of the
16 aeration stations.

17 MS. DEXTER: Have we heard any
18 definitive testimony that there is reduced
19 buoyancy in these areas? I heard an opinion
20 this morning characterized as an old wives'
21 tale. I don't know if we've heard an actual
22 scientific testimony about that on the
23 record.

24 DR. GRANATO: There's been so much

1 testimony, it's hard to offer a definitive
2 answer. Do you recall that?

3 MR. ANDES: I think the only
4 discussion of it was in Dr. Zenz' testimony.

5 MS. DEXTER: All right.

6 MS. WILLIAMS: Dr. Granato, are you
7 familiar with the study by the District of
8 Bubbly Creek in 2003, 2003 Bubbly Creek Water
9 Quality Improvement Demonstration Project?

10 DR. GRANATO: I have some familiarity
11 with it.

12 MS. WILLIAMS: Do you -- I just want
13 to know if you could just very generally
14 summarize for the record the conclusions of
15 that study with regard to dissolved oxygen
16 levels.

17 MR. ANDES: Could he see the report?

18 MS. WILLIAMS: Yeah. I don't know if
19 it's in the record. Do you?

20 MR. ANDES: I don't recall.

21 MS. WILLIAMS: It's No. 04A. I
22 couldn't find where it was as an exhibit, but
23 that --

24 MS. WASIK: I think it was in Sam

1 Dennison's testimony, but I'd have to double
2 check.

3 MR. ANDES: Is that a report that
4 Dr. Dennison was involved in in which case
5 we'd want him to answer questions about it?

6 MS. WILLIAMS: My recollection was
7 this was deferred that he didn't answer, but
8 I'm trying to tie up loose ends with
9 Mr. Granato if he knows. If he's not
10 familiar with the study -- did you want me
11 to -- is Dr. Dennison here? If he wants to
12 summarize the study, I don't care.

13 MR. DENNISON: I'd have to read it.

14 HEARING OFFICER TIPSORD: Have we
15 established if this report -- it's not in the
16 record? If it's not in the record, then we
17 probably need to get it in the record. If
18 we're going to summarize --

19 MS. WILLIAMS: The District thinks
20 it's in the record, and I do not dispute
21 that, but I can't point it out for you.

22 HEARING OFFICER TIPSORD: And where do
23 we think it is in the record? I'm not
24 finding it on the exhibit list. Is it an

1 attachment to somebody's testimony?

2 MR. DENNISON: Probably in my
3 testimony.

4 HEARING OFFICER TIPSORD: An
5 attachment to Mr. Dennison's --
6 Dr. Dennison's testimony. Okay.

7 MS. WILLIAMS: We just have one copy.
8 We can enter it if you want, Marie.

9 HEARING OFFICER TIPSORD: That's all
10 right. If it's in the record, that's fine.
11 I don't want us summarizing information.

12 MR. ANDES: If it's not in the record,
13 I don't have any objection to it being in the
14 record.

15 MS. WILLIAMS: Me either. I just
16 didn't bring copies.

17 MR. ANDES: As to who can best answer
18 the questions, I guess it depends on what the
19 question is.

20 MS. WILLIAMS: I just want to make
21 sure that the summary of the conclusions of
22 that study is presented in the testimony, so.

23 DR. GRANATO: Yeah. I think for me I
24 am not familiar enough to answer specific

1 questions without refreshing my memory of
2 what the report states.

3 MS. WILLIAMS: Is there anyone else
4 that could, Fred?

5 MR. ANDES: Well, it sort of depends
6 on who was involved in doing the report.

7 HEARING OFFICER TIPSORD: Let's go off
8 the record for a couple of minutes and let
9 everybody stretch a little bit and figure out
10 who can best answer that.

11 (Short break taken.)

12 MR. ANDES: We are downloading from
13 the Board's website just to check on whether
14 that report is included this Dr. Dennison's
15 testimony of Bubbly Creek. I believe it is.
16 One of the attachments, and I believe there
17 were actually some questions about that
18 exhibit when Dr. Dennison testified back in
19 December, Dr. Granato isn't able to testify
20 about that document. There is a summary
21 conclusion section which summarizes the
22 report. If there's a specific question
23 Dr. Dennison was involved in review of the
24 document and can try to answer it, but he

1 Dr. Dennison?

2 MR. DENNISON: We were hoping to --

3 HEARING OFFICER TIPSORD: Just for the
4 record, Dr. Dennison is still under oath from
5 the last hearing.

6 MR. DENNISON: We were hoping to be
7 able to show some reaeration capacity in
8 Bubbly Creek by pumping water from Bubbly
9 Creek through the Racine Avenue pumping
10 station back to the Stickney Water
11 Reclamation plant to be treated. We were
12 hoping that that flow would possibly cause a
13 reaeration in Bubbly Creek.

14 MS. WILLIAMS: Dr. Dennison, do you
15 believe that the Bubbly Creek demonstration
16 project showed that co-augmentation alone
17 could significantly lessen the period of time
18 it takes dissolved oxygen to recover
19 following a Racine Avenue Pump Station
20 overflow?

21 MR. DENNISON: I don't recall for
22 sure. I could give an opinion that certainly
23 during wet weather it was not successful in
24 doing so, and not even in dry weather, if I

1 remember correctly.

2 MR. ANDES: It was also assessing
3 relative to the current standards not the
4 proposed more stringent standards.

5 MR. DENNISON: That's correct.

6 MS. WILLIAMS: So when you say it was
7 not successful, you disagree that the
8 recovery time was shorter?

9 MR. ANDES: He didn't say that. He's
10 trying to remember something that he was
11 involved in --

12 MS. WILLIAMS: I wasn't trying to
13 mischaracterize. I was just trying to
14 understand the answer to my question.

15 MR. DENNISON: Also, I believe we also
16 did not recommend that this was a useful
17 matter of operation since it was so -- it was
18 not cost-effective to pump this back to
19 Stickney for treatment, that the operating
20 costs were great.

21 MS. WILLIAMS: It was too expensive?

22 MR. DENNISON: Yes.

23 MR. ANDES: I would just add that
24 whatever Dr. Dennison's characterization of

1 the report is, the report can certainly be
2 included in the record for its actual
3 language.

4 MS. WILLIAMS: Thank you.

5 MR. ANDES: I believe it was
6 referenced in his testimony but not attached,
7 so.

8 MS. WILLIAMS: Does that -- okay. If
9 you think it was referenced but not attached,
10 do you want to submit it or no?

11 MR. ANDES: Do you want to submit it?
12 We didn't see any reason to submit it.

13 MS. WILLIAMS: Well, I think Marie
14 felt if it had not been part of the record we
15 should submit it.

16 HEARING OFFICER TIPSORD: Well,
17 considering you're asking several questions
18 about it, I think we need to put it in the
19 record.

20 MS. WILLIAMS: You want us to put it
21 in the record?

22 HEARING OFFICER TIPSORD: Since you
23 asked the question about it, yeah.

24 MS. WILLIAMS: Okay. I mean after the

1 hearing or do you want -- can we just leave
2 our one copy? That's not enough copies for
3 you guys, right?

4 HEARING OFFICER TIPSORD: We can get
5 by with one copy, but you would rather wait
6 and submit it after hearing. If you want to
7 take it back with you, that's fine.

8 MS. WILLIAMS: Madam Hearing Officer,
9 I'm handing you a document entitled 2003
10 Bubbly Creek Water Quality Improvement
11 Demonstration Project Report 0408. I'd like
12 to have it admitted into evidence.

13 HEARING OFFICER TIPSORD: If there's
14 no objection, we will mark this as
15 Exhibit 232.

16 Seeing none, it's Exhibit 232.

17 MS. WILLIAMS: And just to clarify,
18 Mr. Granato, are you the author of
19 Exhibit 231, Response to Questions on
20 December 3 hearing regarding dredging, I
21 believe? Is this your -- I wasn't sure
22 because it was entered with your testimony.
23 Are you the author of this document?

24 DR. GRANATO: It's a team-authored

1 document.

2 MS. WILLIAMS: Who was on the team?

3 DR. GRANATO: Several staff members in
4 my division and myself.

5 MS. WILLIAMS: And you ultimately were
6 the approver of their work or do you want to
7 name the other team members --

8 DR. GRANATO: Yeah. I guess you could
9 say I'm the ultimate approver.

10 MS. WILLIAMS: I think we may --
11 Mr. Andes said we've already addressed this
12 with Mr. Lanyon's testimony, and I'm not
13 certain if he's correct about that or not.
14 But he did suggest that we could just ask you
15 to specify when the reservoirs will be
16 completed and as part of the TARP project.

17 DR. GRANATO: Well, the current
18 estimate is 2024 for complete completion --
19 completed construction of the entire
20 reservoir portion of the plant.

21 MS. WILLIAMS: Okay. I don't think I
22 have anything else.

23 MS. DEXTER: I have a few follow-ups
24 based on our questions this morning that it

1 was indicated that Dr. Granato would be the
2 better person to answer some questions, so I
3 will give it a try.

4 Does the Chicago Area Waterway
5 System currently always meet the existing
6 dissolved oxygen standards?

7 DR. GRANATO: I guess we don't see
8 that as a relevant question to the
9 rulemaking.

10 MS. DEXTER: Is that an objection to
11 my question?

12 HEARING OFFICER TIPSORD: I think
13 that's a matter of public information. I
14 think it's relevant.

15 DR. GRANATO: No, they don't.

16 MS. DEXTER: What effect is the
17 existing level of violations of the current
18 dissolved oxygen standards have on the
19 District?

20 DR. GRANATO: What effect does it have
21 on us?

22 MS. DEXTER: Yes.

23 DR. GRANATO: Damages ourself esteem.
24 I don't know what effect it has on us.

1 MS. DEXTER: All right. What
2 investments does the District intend to make
3 to ensure that compliance of the water
4 quality standards that are now applicable to
5 the CAWS?

6 DR. GRANATO: Well, the District's
7 focus is on the current rulemaking and the
8 standards that will ultimately spring from
9 it. That's been our focus for the last seven
10 years since the CAWS UAA was initiated. It's
11 our understanding that the current standards
12 will be replaced as a result of this
13 rulemaking, and it's our endeavor to
14 contribute the formulation of sound set of
15 standards. And once those standards are in
16 place it's our intention to work with IEPA
17 and other organizations to meet those
18 standards.

19 MS. DEXTER: You don't dispute that
20 the standards that are currently in place
21 apply to the District?

22 MR. ANDES: I think that's a legal
23 question. Not really qualified to say what
24 applies and what doesn't apply.

1 MS. DEXTER: Okay. Has the District
2 determined the difference in cost between
3 meeting the existing standards applicable to
4 the CAWS and the proposed standards?

5 DR. GRANATO: No.

6 MS. DEXTER: And I think that's it.

7 HEARING OFFICER TIPSORD: Thank you.
8 Any other questions for Dr. Granato? Thank
9 you very much. And I believe that concludes
10 the current witnesses before us on behalf of
11 the District, and we will start on April 15.
12 And I will have a hearing officer order out
13 soon telling you who's testifying, when. On
14 April 15 we have at least two witnesses from
15 the environmental groups, both of whom have
16 about 15 pages of questions, so we may have
17 three witnesses, but I'll put that out later
18 on this week once I get that information from
19 the environmental groups and get the room
20 assignments for the hearings. Thank you once
21 again. It's been a pleasure and I'll see you
22 all April 15. We're adjourned.

23 (Which were all the
24 proceedings had.)

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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 Mukahirn

LAURA MUKAHIRN, CSR
CSR NO. 084-003592

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