

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

NOTICE OF FILING

To: ALL COUNSEL OF RECORD
(Service List Attached)

PLEASE TAKE NOTICE that on the 18th day of July, 2011, I, on behalf of the Metropolitan Water Reclamation District of Greater Chicago (the "District"), electronically filed with the Office of the Clerk of the Illinois Pollution Control Board, **the District's Testimony Questions for David Thomas.**

Dated: July 18, 2011.

**METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO**

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

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PROOF OF SERVICE

The undersigned attorney certifies, under penalties of perjury pursuant to 735 ILCS 5/1-109, that I caused a copy of the foregoing, **Notice of Filing** and **Metropolitan Water Reclamation District of Greater Chicago's Testimony Questions for David Thomas**, to be served via First Class Mail, postage prepaid, from One North Wacker Drive, Chicago, Illinois, on the 18th day of July, 2011, upon the attorneys of record on the attached Service List.

/s/ David T. Ballard _____

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METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO'S TESTIMONY QUESTIONS FOR DAVID THOMAS

1. On page 2, you discuss the value of “smaller scale improvement projects that could benefit particular fish species.”

1a) Do you agree that fish recruitment depends not only on small isolated areas of spawning habitat but also on adjacent nursery and feeding habitat for small fish?

1b) Are you aware of any data demonstrating a benefit in CAWS fish community from the fish motel in the Chicago River or to the floating pods that were constructed in the NBCR by Diversey?

1c) How much area would “smaller scale improvement projects” have to cover in the CAWS in order to improve fish communities? How does the number and distribution of these areas affect a fish species?

2. On page 2, you discuss “limits” of electrofishing.

2a) Have you reviewed the literature sources that Scott Bell provided documenting an effective depth of 4 meters for electrofishing?

2b) Do you have counter literature sources suggesting 4 feet is the effective limit or is this just your opinion?

2c) Did you consider the conductivity in the CAWS when you arrived at 4 ft?

2d) Have you ever utilized electrofishing in the CAWS?

3. On page 3, you talk about observations of habitat that you made during a one-day boat tour of the CAWS in 2009.

3a) You have been in the CAWS one time in the last decade, is that correct?

- 3b) Have you reviewed the physical habitat data collected by the District who are in the CAWS on a nearly daily basis in the spring, summer, and fall?
- 3c) Did you take field notes or fill out data sheets on July 31, 2009 when you toured the CAWS or is this info simply from your recollection? Could it have been the Little Calumet River where you saw aquatic vegetation? Do you know the exact location where the Cal-Sag begins?
- 3d) Are you aware that debris and log jams in the CAWS currently have to be removed by the District in order to maintain free flowing water in the event of a storm?
4. On page 3, you suggest improving habitat by use of sheet pilings. Are you testifying that sheet piling is a positive attribute for aquatic life?
5. On page 3, you raise questions about the discussion of macroinvertebrates in the habitat reports.
- 5a) The focus of the habitat reports is on habitat and fish, correct?
- 5b) Are you aware what percentage EPT taxa comprise in Hester Dendy samples?
- 5c) Would you say it is plausible that low number is indicative that there is not hard substrate availability in the CAWS so the organisms aren't present to colonize the Hester Dendy samplers?
- 5d) You acknowledge that "Most EPT taxa are absent from the soft shifting substrates in large rivers." If the vast majority of the system only has soft shifting substrates, would you expect EPT taxa to be low?
- 5e) What percentage of the Kaskaskia River is embedded in silt? Are you aware of what percentage of the CAWS are either entirely silt or embedded in silt? If silt is the substrate that is vastly dominant throughout the system, wouldn't a ponar be the appropriate way to sample that strata? Have you ever assessed the sediment characteristics in the CAWS in order to evaluate what the best sampling techniques would be?
6. On page 3, you raise questions regarding fish species sampling, based on collections of fish during rotenone events.
- 6a) Do you know what years and whose fish data was reported in CDM 2007? Are you aware of more recent fish collections done by the District and by LimnoTech that are in the record and were considered in the District's proposal beyond what was recorded in CDM 2007?
- 6b) How many smallmouth bass were counted in the CSSC dumpsters after the December 2009 rotenone event according to the IDNR public comment table 2 on page 9?

6c) How many rock bass were counted?

7. On page 3, you raise questions about tolerance classifications, and you make a statement that steelcolor shiner is an intolerant species.

7a) Are you aware that the steelcolor shiner is considered as intermediately tolerant by the USEPA, Indiana, Ohio, and IEPA?

7b) How many steelcolor shiners (caught by electrofishing in 2008) were collected in either of the rotenone events in the CSSC or Little Calumet?

8. On pages 4 and 5, you discuss the significance of dissolved oxygen (DO).

8a) Have you reviewed the extensive continuous dissolved oxygen data that the District has collected throughout the CAWS over the past 12 years to assess the current dissolved oxygen conditions and to determine whether current conditions are suitable for early life stages of fish species that you expect could thrive in the CAWS?

8b) What impact do you believe the dramatic drops in dissolved oxygen during wet weather would have on fish productivity in the CAWS?

8c) Do you believe that the incremental increases in dissolved oxygen proposed by IEPA will produce a measurable difference in fish diversity and species richness, or fish spawning activity? If so, where are the new species going to come from? What effect will the electric field barrier north of the confluence of the Des Plaines River and the Illinois Waterway have on fish migration? Do you agree that the CAWS lacks connectivity to a higher quality riverine resource now and for the foreseeable future?

9. On page 4, you state that SEPA stations attract fish due to lower DO. In addition to DO, do the SEPA stations also provide unique habitat with their submerged weirs, boulders, and shallows?

10. On page 5, you state that channel catfish should be classified as moderately tolerant instead of tolerant.

10a) If channel catfish are less tolerant and require oxygenated waters, and given your conclusion that these fish are already successfully spawning in the CAWS, would you agree that water quality is already appropriate to support tolerant or intermediately tolerant fish species, including the early life stages channel catfish?

10b) If these species are already spawning successfully in the waterway as is stated in the IDNR conclusions (page 4), isn't this an indicator that these fish communities are self-sustaining at current water quality levels?

11. On page 5, you discuss statistical vs. biological significance, in a situation where changes in DO are not statistically significant. You acknowledge that fish can move within the CAWS in

order to avoid short periods of low DO. In this case, do you support a Wet Weather Limited Use Standard? If not, why not?

12. On page 6, you question the conclusion in Jennifer Wasik's testimony that the CAWS habitat cannot become conducive to spawning, and you state that Limno Tech did not reach that same conclusion.

12a) Didn't the Limno Tech report conclude that habitat is the primary limiting factor with regard to the health of the fish population in the CAWS?

12b) Was it part of the purpose of the LimnoTech report to determine the biological relationship between habitat and spawning?

12c) Isn't Dr. Mackey's testimony as to habitat and spawning consistent with the conclusions in Ms. Wasik's testimony?

13. On page 7, you claim that two intolerant species that should be helped most by an improvement in water quality are smallmouth bass and rock bass.

13a) Are you aware that in Ms. Wasik's testimony, which you state did not mention the rock bass, she pointed out that over seven years of fish collection at 34 CAWS monitoring stations, 143 rock bass and 241 smallmouth bass were collected? Do those numbers indicate that those species are found commonly? What percentage of total fish collected do these fish comprise?

13b) Are you aware that in the December 2009 rotenone collections, no rock bass or smallmouth bass were counted in the fish collected from the dumpsters?

14. On page 7, you try to compare the fish species in the CAWS to those in the Illinois River. Are you testifying that the fish populations in the Upper Illinois River are the same as in the CAWS? In other words, under current water quality conditions, is the CAWS achieving the same fish balance as the General Use Illinois River waters? If not, what are the differences in fish populations?

15. On page 7, you state that fish often move long distances, so even limited habitat creation may benefit fish throughout the system.

15a) Do you have literature sources for your statements?

15b) Are you aware of a fish barrier preventing movement of high quality riverine fish from the Illinois Waterway to the majority of the CAWS?

16. On page 7, you state the following: "I am convinced that selective and limited habitat improvements could significantly help at least some of the fish species in the CAWS."

16a) Do you feel comfortable making this statement based on your one day touring the CAWS?

16b) Hasn't evidence to the contrary been submitted by District personnel, who are actually on the waterways on a regular basis?

17. On page 7, you mention the floating beds of vegetation "such as has been done to a limited degree in the Chicago River." Have these beds been demonstrated to improve fish communities in the NBCR? In the CAWS? What is their current condition?

18. On page 8, you state that many species will have very localized distributions, so increasing diversity of habitat will help to increase the diversity of fish populations.

18a) How much of an increase in habitat diversity is needed to make a biological difference?

18b) What percentage of length or area do boat slips comprise in the CAWS? Would you guess < 1% given the 78 mile length of the CAWS?

19. On page 8, you advocate for reliance on erosion of banks to create habitat, and you characterize that erosion as a natural process.

19a) Are you aware that bank reinforcements are often constructed when channel walls are degraded such as they can no longer efficiently function for flood conveyance and navigation?

19b) Is it your understanding that the uses of flood water conveyance and navigation are to be eliminated in the near future?

20. On page 8, you make statements about the impact of low DO on EPT taxa.

20a) Based on your knowledge of macroinvertebrates in the CAWs, how many EPT taxa have been collected?

20b) At what low DO levels for how long, are the few EPT taxa that have been found in the CAWS adversely affected?

20c) Have you found any specific type of macroinvertebrates in the CAWS that are affected?

21. On page 8, you make statements about EPT taxa found on hard substrates. What percentage of the CAWS contains hard substrates?

22. On page 8, you express concerns about the wet-weather limited use (WWLU), including that the trigger is "quite low."

22a) In your understanding, how will the WWLU change the DO conditions in the CAWS?

22b) Is this statement based on some kind of analysis to determine what level would be appropriate?

22c) Did you review the District justification for the triggers?

22d) Can the current or proposed DO standards be achieved in the CAWS following 0.25 inch rainfalls in pre-TARP conditions?

22e) Are you aware that CSOs are not the only factor causing low DO in the waterway during wet weather?

Dated: July 18, 2011

Respectfully submitted,

**METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO**

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