BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

PRE-FILED TESTIMONY OF SAMUEL G. DENNISON ON BEHALF OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO CONCERNING RECREATIONAL DESIGNATIONS OF THE CHICAGO AREA WATERWAY SYSTEM.

My name is Samuel G. Dennison. I am a Biologist IV in the Environmental Monitoring and Research Division of the Research and Development Department of the Metropolitan Water Reclamation District of Greater Chicago (District). I received a Bachelor of Arts degree with a major in Biology from Saint Mary's University in Winona, Minnesota, a Master of Science degree in Fisheries Biology from Iowa State University in Ames, Iowa, and a Doctor of Philosophy degree in Biology from the Illinois Institute of Technology in Chicago, Illinois. I am a Certified Fisheries Professional with the American Fisheries Society and also a Past President of the Illinois Chapter of the American Fisheries Society.

I have been employed by the District since 1971. My primary responsibility from 1974 through 2003 was monitoring the fish populations in Chicago area waterways. Since 2003, I have served as Head of the Aquatic Ecology and Water Quality Section within the Environmental Monitoring and Research Division, where I supervise a staff of ten persons.

Today I will be presenting testimony in regard to the Recreational Use Designations of the Chicago Area Waterway System (CAWS). As a biologist with the District, my work often included collecting fish from many 400-meter long sample locations throughout the CAWS. For fish collecting, I usually used flat-bottom electrofishing boats, 14-18 feet long. While collecting

fish or traveling to and from the sample locations, I had plenty of time to observe the physical conditions of the waterways, such as the condition and structure of the banks and what was present on the riparian areas.

In IPCB R08-9, most waterways in the CAWS have been designated for Incidental Contact Recreation. Incidental Contact Recreation includes fishing, commercial boating, small craft recreational boating, and any limited contact associated with shoreline activity such as wading. At this point it should be noted that it is reasonable for local governments to establish enforce certain regulations and restrictions in order to ensure the safety of their citizenry. For example, in Chicago, along the Lake Michigan lakefront, there are numerous signs warning, "no swimming," due to hazards like deep waters, strong currents, or dangerous access to the water. The water quality of Lake Michigan may be very good, but there are many other valid reasons for these swimming restrictions other than water quality alone.

The CAWS has similar safety issues that can make swimming, wading, and boating dangerous activities. Safety issues in the CAWS include: (1) the man-made and modified waterways do not have a shallow area along the banks; (2) the depth along the banks increase very rapidly proceeding away from the sides of the waterways; (3) the banks of the waterways are lined with high vertical sheet piling or large limestone rocks; (4) periodic draw downs of the water level cause an unexpected rapid increase in stream velocity; and (5) a large number of commercial barges and large private power boats operate in the CAWS.

I have had occasional, unexpected, "close calls" over the years that have reinforced the idea that the CAWS can be extraordinarily dangerous for recreational activities throughout its entire length. One time as my sampling crew and I were on the north side of the Calumet-Sag Channel, just inside the point where the Channel bisects the Illinois Michigan Canal (Attachment

1), a barge that broke loose from a tow swiftly and silently moved towards a not so silent collision with the Channel wall just a few feet from our electrofishing boat. I had no warning that the barge was headed straight for us and I would not be giving this testimony today had we decided to head out into the Calumet-Sag Channel a minute or so previous to the barge's collision with the channel wall.

There were also many times while I was operating our electrofishing boat that I had to avoid the wakes of large pleasure craft or barges in order to keep from getting capsized.

When I first started collecting fish for the District from the CAWS in the 1970's, I had to make the decision not to use a minnow seine. Seining is often conducted in order to capture small fish while wading in a stream. The decision not to use seines in the CAWS was predicated on the fact that it was too dangerous to pull a seine along the banks of these waterways because of the complete lack of shallow areas and/or the sudden drop off in depth from a narrow relatively wadeable area to much deeper water.

In spite of the hazardous physical conditions described above, a number of waterways in the CAWS were designated for Incidental Contact Recreation in the CAWS Use Attainability Analysis (UAA) report.

Because of the many physical hazards in the CAWS, the following waterways should be designated for Non-Contact Recreation, contrary to the proposed Incidental Contact Recreation classification: (1) Chicago Sanitary and Ship Canal from the South Branch of the Chicago River to the junction with the Calumet-Sag Channel; (2) the entire Calumet-Sag Channel; (3) the Chicago River; and (4) Bubbly Creek (South Fork of the South Branch of the Chicago River).

Non-Contact Recreation is defined in Section 301.323 of the IEPA's regulatory proposal as "any recreational activity in which human contact with the water is unlikely, such as pass

through commercial or recreational navigation, and where physical conditions or hydrologic modifications make human contact unlikely or dangerous." The physical limitations and hydrological modifications described above clearly apply to reaches of the CAWS that have been incorrectly designated as Incidental Contact Recreation in the proposed regulations.

IEPA's Statement of Reasons describes the conditions in the CAWS very effectively as follows: "Wakes coupled with vertical-wall construction in many of the waterway reaches make recreational uses dangerous. Small craft can easily be capsized and persons in the water will have little if any route for escape" (page 33). Approximately 17,000 barges lock through Lockport Lock and Dam, and over 9,000 barges lock through O'Brien Lock and Dam each year (http://www.iwr.usace.army.mil/ndc/lpms/lock2006web.HTM). Based on the physical hazards present in the CAWS, the following waterways should be considered as being non-contact recreational, contrary to the proposed standards, including the Chicago Sanitary and Ship Canal from the South Branch of the Chicago River to the junction with the Calumet-Sag Channel, the entire Calumet-Sag Channel, the Chicago River, and Bubbly Creek (otherwise known as the South Fork of the South Branch of the Chicago River). Justification and explanation for designating these waterways as Non-Contact Recreation are as follows:

The Chicago Sanitary and Ship Canal from the South Branch of the Chicago River to the confluence with Calumet-Sag Channel has unsafe depths for wading and lacks points of egress due to vertical sheet-pile channel walls. This is a pass through area for recreational craft and commercial barge traffic (Attachment 2). The proposed Incidental Contact Recreation use designation for the Chicago Sanitary and Ship Canal is alarmingly inconsistent with IEPA's realistic verbiage describing the CAWS on page 33 in the Statement of Reasons.

The Calumet-Sag Channel has unsafe depths for wading along the banks of the waterway. It is a pass through area for recreational craft and commercial barge traffic (Attachment 3). Similar to the Chicago Sanitary and Ship Canal, the Calumet-Sag Channel is a man-made, deep, trapezoidal-shaped channel. The United States Army Corps of Engineers (USACE), who operate the Chicago area Locks, reported 8,792 barges traveled up or down the Calumet-Sag Channel during 2006 alone (data available on USACE website at www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm). The Calumet-Sag Channel lacks points of egress along the waterway if a boat capsizes or an emergency situation arises. Industrial riparian land use is common along the Calumet-Sag Channel, except for an approximately 5 mile reach upstream of the confluence with the Chicago Sanitary and Ship Canal, which is forest preserve. Steep limestone channel walls, soft contaminated sediments, and steep drop-offs along the banks characterize most of the Calumet-Sag Channel.

Bubbly Creek has extremely deep fine particulate silt sediments deposited on the bottom resulting in unsafe conditions for wading. The sediments are contaminated with organic pollutants and heavy metals. There are steep banks and vertical sheet pile walls in some reaches (Attachment 4). During and following wet weather events, the District's Racine Avenue Pumping Station discharges a large volume of combined sewage overflow into Bubbly Creek that causes an unexpected rise in the water level along with a substantial increase in flow velocity in the narrow creek. These hydrologic conditions are dangerous for any individual in the water and for boaters. In addition to these dangerous conditions, points of egress are very limited due to steep banks and steel sheet piling along the banks of most of the waterway reaches.

The Chicago River is analogous to the section of the Calumet River from Lake Michigan to Lake Calumet, which the IEPA has designated as Non-Contact Recreation in IPCB R08-9. Similar to the comparable section of the Calumet River, recreational boaters use the Chicago River as a gateway to enter Lake Michigan from the inland waterways. Like the Calumet River, the Chicago River has high vertical sheet-pile channel walls and no shallow areas occur along the waterway. The same reasoning that IEPA used to designate the Calumet River Non-Contact Recreational should be applied to the Chicago River. While the number of commercial barges operating in the Chicago River is small, the river does support navigation from a significant and growing number of large commercial tour boats, in addition to the high volume of recreational power boats. The Chicago River lacks points of egress from the waterway should a boat capsize or an emergency situation arise (Attachment 5).

Respectfully submitted,

By: Samuel G. Dennison

Attachments

Attachment 1. Looking north at junction of Calumet-Sag Channel (right foreground) with the Chicago Sanitary and Ship Canal (left background). Opening to Illinois and Michigan Canal visible to the left of the first barge on the Calumet-Sag Channel).

Attachment 2. Barge traffic on Chicago Sanitary and Ship Canal. TARP reservoir under construction. Des Plaines River is visible on the other side of the highway.

Attachment 3. Barge on Calumet-Sag Channel looking East from 104th Avenue Bridge.

Attachment 4. Bubbly Creek, view looking north from 35th Street.

Attachment 5.Chicago River, view looking West from the Wells St. Bridge.

References

http://www.iwr.usace.army.mil/ndc/lpms/lock2006web.HTM

www.iwr.usace.army.mil/ndc/wcsc/wcsc.htm

Attachment 1

Attachment 1, Looking north at junction of the Calumet-Sag Channel (right foreground) with the Chicago Sanitary and Ship Canal (left background). Opening to Illinois and Michigan Canal visible to the left of the first barge on the Calumet-Sag Channel).

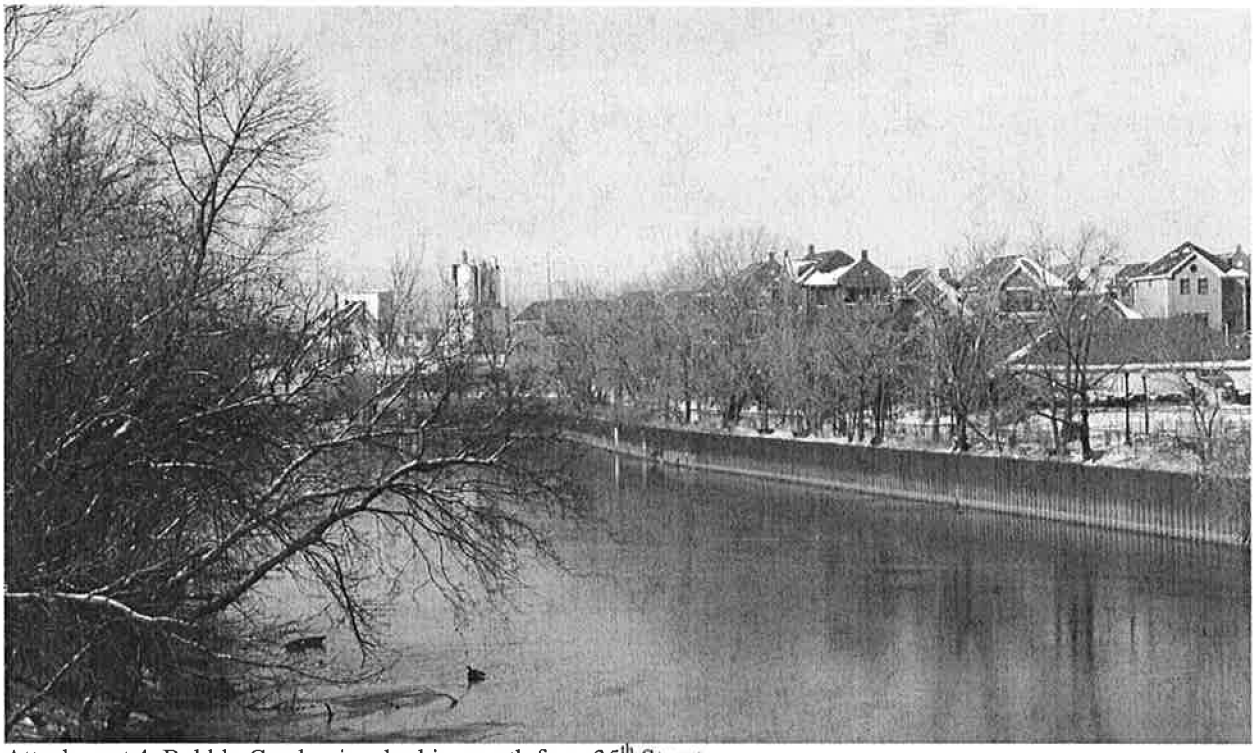
Attachment 2

Attachment 2 Barge traffic on Chicago Sanitary and Ship Canal. TARP reservoir, under construction. DesPlaines River is visible on the other side of the highway.

Attachment 3

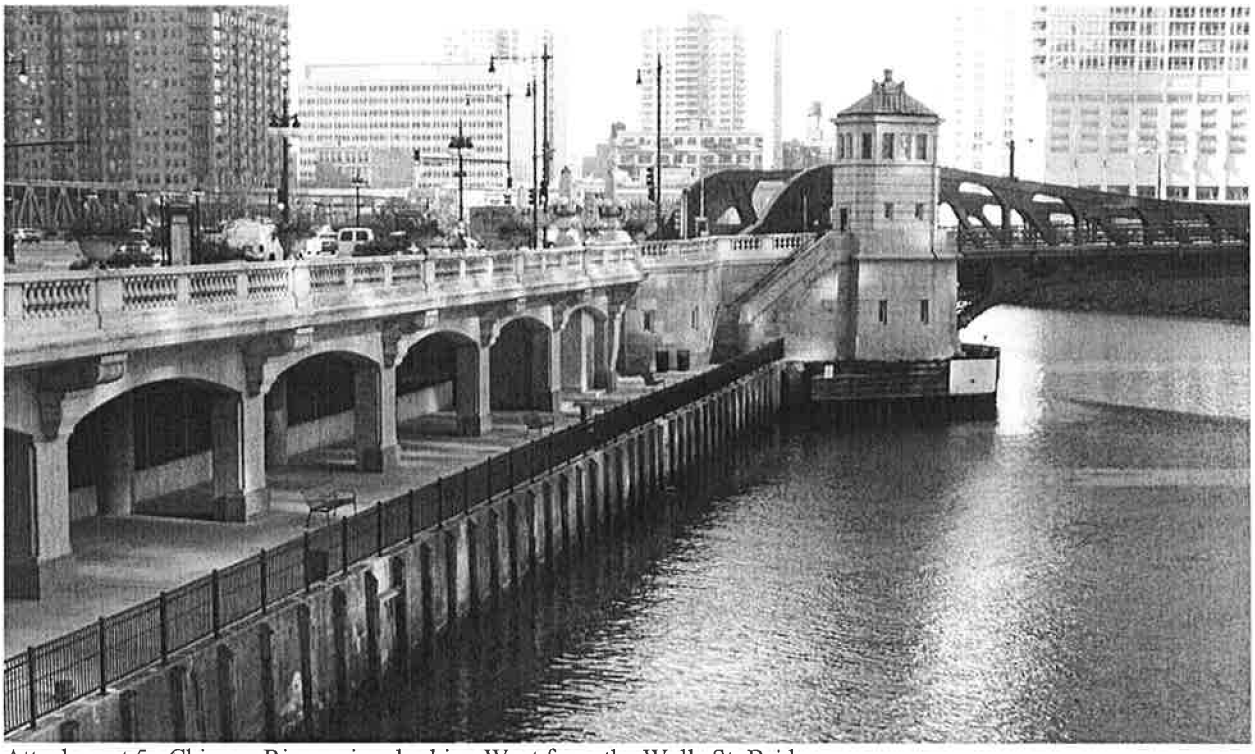
Attachment 3: Barge on Calumet-Sag Channel looking East from 104th Avenue Bridge.

Attachment 4



Attachment 4. Bubbly Creek, view looking north from 35th Street.

Attachment 5



Attachment 5. Chicago River, view looking West from the Wells St. Bridge.