

ILLINOIS POLLUTION CONTROL BOARD

August 5, 2010

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

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by G.T. Girard):

**SUMMARY OF TODAY'S ACTION**

By today's action, the Board proposes rules for first notice that establish the recreational use designations for the Chicago Area Waterway System (CAWS) and the Lower Des Plaines River (LDPR) as proposed by the Illinois Environmental Protection Agency (IEPA) with no significant alterations. The Board will not proceed with proposed amendment to Section 302.402 at this time and will amend the language of Section 303.204. Also the Board proposes to repeal Section 303.441, a section not a part of the IEPA's proposal.

The record clearly demonstrates that the CAWS and the LDPR cannot attain the Clean Water Act recreational use goal of recreating on and in the water (swimmable) at this time. However, the Board's thorough examination of the record in this proceeding provides clear evidence of existing recreational uses in the CAWS and LDPR that must be protected. Therefore, the Board sends to first notice a proposal that individual reaches of the CAWS and LDPR will be designated either as incidental contact recreation, non-contact recreation, or non-recreational waters as listed in Table 5 on pages 80 and 81 of this opinion.

**Guide to the Board's Opinion**

The Board notes that numerous public hearings have been held, numerous comments received, and exhibits have been filed, all in addition to the IEPA's original proposal. Thus, for the convenience of the reader, the Board notes that the IEPA's statement of reasons is cited as "SR" and attachments to the proposal are cited as "Attach" while hearing exhibits are cited as "Exh.". Hearing transcript are cited by date 01/01/01 and A or P if there are morning or afternoon transcripts. Public comments are cited as "PC".

The Board's opinion begins by addressing preliminary matters below and continues with the procedural background (page 2) followed by the statutory background (page 4). The Board next supplies the historical background and a description of the waterways at issue (page 4). The

regulatory history is included next (page 7). The Board then summarizes the Clean Water Act requirements and the corresponding federal regulations (page 9).

The rulemaking detail begins with the UAA for the CAWS (page 11) followed by the UAA for the LDPR (page 26). The regulatory proposal follows next (page 29). The Board summarizes the testimony (page 34) and then the public comments (page 56). Finally, the Board discusses the Board's decision (page 78).

### **PRELIMINARY MATTERS**

Before beginning a discussion on recreational uses, the Board notes that the record had been extensively developed prior to the Board's decision to divide the docket into four subdockets. The Board has separated from the main docket the relevant information for Subdocket A; however, the Board will not specifically list the relevant items. The Board will summarize, refer to and discuss those items where appropriate throughout this opinion and order. Subdocket A is dedicated to making a determination on the recreational use designations for CAWS and LDPR. Subdocket A will not address any issues regarding effluent disinfection, aquatic life uses, or water quality standard for the protection of aquatic life uses.

Also, the Board notes that on May 17, 2010, Midwest Generation L.L.C. (Midwest Generation) and Citgo Petroleum Corporation and PDV Midwest LLC (Citgo/PDV) filed motions for leave to file a reply to IEPA's public comment (PC 298). On May 25, 2010, Stepan Company (Stepan) filed a motion for leave to file a reply in concurrence with Midwest Generation. IEPA has not filed a response to the motions. The replies all relate to the IEPA's final comment concerning inclusion of Section 302.402 and 303.204 in the first notice proposal. The Board grants the motions and will consider the replies in deciding what provisions to propose for first notice.

### **PROCEDURAL BACKGROUND**

On October 26, 2007, the IEPA filed a proposal under the general rulemaking provisions of Sections 27 and 28 of the Environmental Protection Act (Act) (415 ILCS 5/27, 28 (2006)). Generally, the proposal will amend the Board's rules for Secondary Contact and Indigenous Aquatic Life Uses to update the designated uses and criteria necessary to protect the existing uses of the CAWS and the LDPR. On November 1, 2007, the Board accepted the proposal for hearing. On November 15, 2007, the Board granted a motion to hold hearings in Chicago and Joliet that accompanied the proposal.

On June 12, 2008, the District filed a motion to stay the rulemaking proceeding, which was supported by: 1) Midwest Generation, 2) Chemical Industry Council of Illinois (CICI), and 3) Stepan. On June 25, 2008, the Environmental Law and Policy Center, Friends of the Chicago River, Sierra Club Illinois Chapter, Natural Resources Defense Council and Openlands (Environmental Groups) filed a response in opposition to the motion. Joining in the opposition the motion was Southeast Environmental Task Force (SETF), the People of the State of Illinois (People), and IEPA. On July 21, 2008, the Board denied the motion to stay and directed the parties to proceed with additional hearings already scheduled.

On March 18, 2010, the Board granted a motion filed by Citgo/PDV for an additional hearing on Asian Carp, but delayed that hearing until later in 2010. The Board also granted a motion filed by the Environmental Groups to sever the dockets. The Board severed the dockets as follows: 1) subdocket A deals with the issues related to recreational use designations, 2) subdocket B addressed issues relating to disinfection and whether or not disinfection may or may not be necessary to meet those use designations, 3) subdocket C addresses the issues involving proposed aquatic life uses, and 4) subdocket D addresses the issues dealing with water quality standards and criteria which are necessary to meet the aquatic life use designations.

The Board has held 39 days of hearing as of March 18, 2010, when the docket was divided, and additional hearings are proceeding in the remaining subdockets. Hearings were held in Chicago: January 28, 2008 through February 1, 2008, June 16, 2008, September 8, 2008 through September 10, 2008, September 23, 2008 through September 25, 2008, February 17 and 18, 2009, March 3 and 4, 2009, April 15, 2009, May 5, 6, and 20, 2009, July 28 and 29, 2009, August 13 and 14, 2009, October 5, 2009, November 9 and 10, 2009 and January 13 and 14, 2010. Hearings were held in Joliet: March 10, 2008 through March 12, 2008, October 27 and 28, 2008 and November 17, 2008. Hearings were held in Des Plaines: April 23 and 24, 2008, and December 2 and 3, 2008.

Not all the testimony received during the 39 days of hearing is relevant to this subdocket. Those whose testimony is relevant are the following:

Rob Sulski of IEPA (Exhibit 1)  
 Richard Lanyon of the District (Exhibit 60)  
 William J. Stuba of the District (Exhibit 62)  
 Samuel G. Dennison of the District (Exhibit 65)  
 Samuel Dorevitch of the District (Exhibit 100)  
 Adrienne D. Nemura of the District (Exhibit 116)  
 Thomas Granato of the District  
 Margaret Frisbee of the Friends of the Chicago River (Exhibit 259)  
 Thomas J. Bamonte on behalf of the Environmental Groups (Exhibit 284)  
 Robert S. Elvert of ExxonMobil (Exhibit 324)  
 Victor Crivello on behalf of SETF (Exhibit 330)  
 Laura Barghusen on behalf of Openlands (Exhibit 338)  
 Gerald W. Adelman on behalf of Openlands (Exhibit 344)

In addition to hearing testimony, the Board received over 350 exhibits and over 300 public comments. Not all comments and exhibits are relevant to a determination of recreational use, and therefore will not be listed. In the March 18, 2010 opinion, the Board set April 15, 2010, as the date for filing final comments in this subdocket. After the docket was split, the Board received the following comments:

PC 287 Eric Kerlow  
 PC 288 James Des Jardins  
 PC 290 United States Environmental Protection Agency

PC 291 Southeast Environmental Task Force  
 PC 292 Citgo Petroleum Corporation and PDV Midwest  
 PC 293 ExxonMobil Oil Corporation  
 PC 294 Environmental Law & Policy Center, Natural Resources Defense Council,  
 Openlands, Friends of the Chicago River, Prairie Rivers Network and the Illinois Chapter  
 of Sierra Club (Environmental Groups)  
 PC 295 Metropolitan Water Reclamation District of Greater Chicago  
 PC 296 The People of the State of Illinois  
 PC 298 Illinois Environmental Protection Agency  
 PC 300 Metropolitan Water Reclamation District of Greater Chicago  
 PC 301 Abigail Lantz of Lincoln Park Juniors  
 PC 302 Environmental Groups  
 PC303 John R. Kindra, Kindra Lake Towing, L.P.

### **STATUTORY BACKGROUND**

This proposal is filed as a regulatory proposal of general applicability pursuant to Sections 27 and 28 of the Act (415 ILCS 5/27, 28 (2008)) and as a general rulemaking pursuant to Section 5-40 of the Illinois Administrative Procedure Act (5 ILCS 100/5-40). SR at 2. Pursuant to Section 27(a) of the Act (415 ILCS 5/27(a) (2008)), the Board is required to take into account “the existing physical conditions, the character of the area involved, including the character of surrounding land uses, zoning classifications, the nature of the existing air quality or receiving body of water, as the case may be, and the technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution.” 415 ILCS 5/27(a) (2008).

### **DESCRIPTION AND ENGINEERING HISTORY OF THE WATERWAYS**

The Board will begin with a description of the CAWS and then the LDPR. The Board will then discuss the engineering history of the CAWS and LDPR.

#### **CAWS Description**

The Chicago area is drained by a series of waterways including many that were manmade to direct water flow away from Lake Michigan to protect drinking water. SR at 18. CAWS consists of 78 miles of manmade channels that allow for commercial navigation, and that provide an outlet for urban stormwater runoff and treated municipal wastewater effluent. *Id.* CAWS also supports recreational boating, fishing, streamside recreation and aquatic life and wildlife. *Id.* Approximately 75% of the waterway consists of manmade canals while the other 25% is formerly natural stream channels which have been deepened, straightened or widened. *Id.* The flow is artificially controlled by four hydraulic structures managed by the District and the water levels can be lowered in anticipation of a storm event. Wastewater treatment plant effluent makes up approximately 70% of the annual flow through the Lockport Powerhouse and Lock and Powerhouse facility. *Id.*

The CAWS drainage area is approximately 740 square miles and comprises the Chicago River and Calumet River drainages. SR at 18. The Chicago River System consists of 55 miles of waterways, includes the Chicago River, Chicago Sanitary and Ship Canal (CSSC), North Branch Chicago River (including the North Branch Canal), North Shore Channel, South Branch Chicago River, and South Fork of South Branch Chicago River. *Id.* The Calumet River System, 23 miles in length, includes Calumet-Sag Channel, portions of Little Calumet River, portions Grand Calumet River, Calumet River, Lake Calumet Connecting Channel and Lake Calumet. *Id.*

### **LDPR Description**

The Des Plaines River originates in Wisconsin and flows into Illinois through Lake and Cook counties. SR at 16. Near Lyons, the Des Plaines River turns southwest and parallels the CSSC and then joins the CSSC. *Id.* The Des Plaines River, without the CSSC, has a drainage area of 13,371 square miles and the CSSC's drainage area is 740 square miles. *Id.* The length of the Des Plaines River from the state border to the confluence with the Kankakee River is 110.7 miles. *Id.*

The LDPR is the section of the Des Plaines River currently designated as Secondary Contact and Indigenous Aquatic Life Uses and extends from the confluence with the CSSC to the Interstate 55 Bridge at River Mile 277.9. *Id.* The LDPR's reach is almost entirely impounded and has two geomorphologically different segments in the Brandon Pool above the Brandon Road Lock and Dam and the portion of the Dresden Island Pool upstream of the Interstate 55 Bridge (Upper Dresden Island Pool). *Id.*

The Brandon Pool is four miles in length and approximately 300 feet wide with depths of 12 to 15 feet. SR at 16. The Brandon Pool is a highly modified stream channel and the CSSC contributes approximately 80% of the flow to the Brandon Pool downstream of the confluence. SR at 17.

The entire Dresden Island Pool is 14 miles long and approximately 800 feet wide. SR at 17. Upper Dresden Island Pool is defined as the 8.1 mile reach of the impoundment that is upstream of the Interstate 55 Bridge. *Id.* Upper Dresden Island Pool is more natural than Brandon Pool and has natural shoreline and side channels. *Id.*

The LDPR is a part of the Upper Illinois Waterway which is one of the busiest inland commercial navigation systems in the United States. SR at 17. The Illinois Waterway provides a link between the Great Lakes/St. Lawrence Seaway navigation system and the Mississippi River navigation system. The entire Illinois Waterway is channelized to maintain a minimum depth of nine feet. *Id.*

### **Engineering History of the CAWS and LDPR**

The CAWS and LDPR consist of portions of the Chicago River, Calumet River and LDPR drainages that were altered by human engineering from the mid 1800s into the mid 1900s. SR at 14. These rivers were altered to promote commercial navigation and to eliminate the flow of untreated sewage into Lake Michigan. *Id.* Canals and dams were added during that time to

redirect the flow of the CAWS to the Des Plaines River. Four canals were dug where no major waterways existed before and five dams were installed. *Id.* The existing channels were enhanced and stream flow was altered by deepening, widening and channelizing various reaches, and by augmenting existing flow with navigational makeup and “discretionary diversion” from Lake Michigan. *Id.* Upon completion of these alterations, flows in several of the major reaches were in a reverse direction of their original paths. *Id.* With urban development, CAWS and LDPR grew in importance as a storm water management systems. *Id.*

Prior to the human alterations that began in the mid 1800’s, the Chicago River flow originated from the north and south branches. SR at 15. The North Branch Chicago River flowed south and converged with north flowing South Branch Chicago River to form the Chicago River. *Id.* The Chicago River then meandered east and emptied into Lake Michigan. *Id.* The North Branch Chicago River received most of the flow from two forks (east and middle), and from a wetland system known as the Skokie Marsh. *Id.* The South Branch Chicago River headwaters included the southern and western forks of the Chicago River. *Id.* The entire drainage for the Chicago River consisted of relatively small, sluggishly flowing prairie streams. *Id.*

The Calumet River System consisted of Little Calumet River, Grand Calumet River and, a network of wetlands. SR at 15. The Little Calumet River began in La Porte County, Indiana, flowed west into Illinois, made a hairpin curve north and then back east. *Id.* The Little Calumet River then joined numerous wetland flows to form the Grand Calumet River, which flowed east and emptied into Lake Michigan in Miller, Indiana. *Id.* During this period, Lake Calumet and the Calumet River had fairly undefined boundaries. *Id.* There existed a complex system of marshes, dunes and swales surrounding an area of open water. Depending on rain events and Lake Michigan levels, the system sometimes flowed into Grand Calumet River and the tributary, Little Calumet River while at other times the system flowed into Lake Michigan or remained stagnant and isolated. *Id.*

Prior to urbanization and the reversal of the Chicago River system, the LDPR had a much smaller amount of water flowing through the system. SR at 15. The LDPR was modified from the original configuration to accommodate shipping traffic and the increased flow from the CAWS. SR 16. Specifically, the LDPR was deepened and channelized and the Lockport Lock and Power House and the Brandon Road Lock and Dam were added. *Id.*

The LDPR has historically received flows from the CSSC, which was created during the alterations of the CAWS. SR at 17. The flow in the CSSC is predominantly treated and partially treated effluents from the District’s wastewater reclamation plants and combined sewer overflows. *Id.* The population equivalent of the effluent carried by the CSSC to the LDPR is about 9.5 million. *Id.* The combined sewer overflows discharges have been reduced with partial completion of the Tunnel and Reservoir Project (TARP) and will be further reduced with the completion of TARP. *Id.*

## REGULATORY HISTORY

Prior to adoption of the Act in 1970, the Illinois Sanitary Water Board had jurisdiction over water quality management activities, including establishment of water quality standards. SR at 7. The Sanitary Water Board initially designated the LDPR as an “Industrial Water Supply Sector” with numeric and narrative criteria appropriate to such use category pursuant to the Federal Water Quality Act of 1965 (PL89-235). *Id.*, citing SWB-8 (Adopted December 1, 1966, approved by U.S. Department of Interior January 27, 1968, reapproved by Sanitary Water Board March 5, 1968). Sanitary Water Board Regulation SWB-15 established the uses and numeric and narrative water quality standards applicable to the Chicago Area Waterway System (“CAWS”). *Id.*, citing SWB-15 (Adopted June 28, 1967, Approved by U.S. Department of Interior January 27, 1968 and reapproved by Sanitary Water Board on March 5, 1968).

The uses specified within Industrial Water Supply Sector and CAWS included “commercial vessel and barge shipping, recreational boating transit, withdrawal and return of industrial cooling and process water, and to receive effluents from industrial and domestic waste treatment facilities.” SR at 8. The narrative standards included freedom from unnatural bottom deposits, floating debris and nuisance or toxic conditions. *Id.* Water quality standards for dissolved oxygen, pH, temperature, dissolved solids, and bacteria were also included in Rule 1.07 of SWB-8 and Rule 1.03 of SWB-15. *Id.* In addition, the North Shore Channel and Chicago River were used for recreational activities, and the Calumet Harbor was used as a public water supply and for fish and aquatic life. *Id.*, citing SWB-15, Rule 1.02.

Following adoption of the initial water quality criteria, the Sanitary Water Board submitted a plan for implementation of the standards applicable to the LDPR and the CAWS to the federal government on August 10, 1967. SR at 8. The U.S. Department of Interior approved these plans on January 27, 1968. *Id.*

The Sanitary Water Board was superseded by the creation of the Illinois Pollution Control Board and IEPA upon enactment of the Act in 1970. *Id.* The Board and IEPA almost immediately focused attention on the development of new water quality standards. *Id.* Draft proposed rules were published for public comment on May 12, 1971 (docketed as Water Quality Standards Revisions, R71-14) and public hearings were conducted shortly thereafter. *Id.*

The Secondary Contact and Indigenous Aquatic Life Use designations were developed during the R71-14 proceedings. SR at 8-9. In developing the draft proposed rules, the Board considered classifying the CSSC as “Restricted Use” upstream of the confluence with the Des Plaines River (at Lockport), and considered placing the LDPR downstream from Lockport within the higher General Use designation. *Id.* Restricted Use was later changed to Secondary Contact and Indigenous Aquatic Life Uses as currently understood. SR at 9. IEPA notes that during the R71-14 proceedings, the Board spent a great deal of time debating where the Secondary Contact and Indigenous Aquatic Life Use designations should end and the General Use designation should begin. *Id.*

IEPA notes that Commonwealth Edison Power Company, the City of Joliet and the United States Steel Corporation of Joliet voiced concerns during the R71-14 proceedings. SR at 9. The Commonwealth Edison Power Company suggested that the Restricted Use designation include the Des Plaines River downstream to the Interstate-55 Bridge. *Id.* The City of Joliet suggested that the point of changeover be made at the confluence of the Des Plaines and Kankakee rivers because being directly downstream of the proposed use change at Lockport would force the City to comply with the General Use standards even though the waters had not come to a point of dilution. *Id.* The US Steel Corporation of Joliet suggested that the Restricted Use designation be extended to the area near Brandon Locks because that area was industrial. *Id.*

Commonwealth Edison made arguments against applying the General Use standards to the LDPR upstream of its confluence with the Kankakee River. SR at 9-10. Commonwealth Edison noted that the costs of imposing the higher water quality standards on the LDPR would outweigh any benefits and that, even if the standards were met, the river would not be suitable for aquatic life due to heavy industrialization, barge traffic, diking of the shoreline and dredging. SR at 10. IEPA states that Commonwealth Edison did not believe that the General Use standards for temperature could be met in the LDPR upstream of its confluence with the Kankakee River, and that meeting the temperature standard was not important due to the small possibility that General Use water quality standards would be met in other respects. *Id.* Because the waterway would be incapable of supporting aquatic life anyway and use of the river for recreation up to the Interstate-55 Bridge was nonexistent due to industrialization, there would be no advantage to adopting the General Use standards. *Id.*

The Board ultimately classified CAWS and the LDPR from Lockport to the Interstate-55 Bridge as Restricted Use waters. *Id.*, citing R71-14 (March 7, 1972). The Board declined to act on amendments proposed by Commonwealth Edison to move the General Use boundary to the confluence with the Kankakee River in Rulemaking R72-4. SR at 10. The Board reasoned that the location of the bridge corresponded to changes in the physical environment characteristics of the area. SR at 10-11, citing R72-4, slip op. at 5 (Nov. 8, 1973). IEPA states that the industrial characteristics described by Commonwealth Edison's witnesses could not be applied to the area below the bridge. SR at 11. The Board also noted that the five-mile stretch downstream of the bridge was capable of providing recreation important to the area and supporting desirable aquatic biota. *Id.*, citing R72-4 at 8.

IEPA notes that few regulatory changes have been made to the use designations or water quality standards applicable to CAWS and the LDPR since 1972. SR at 11. The stretch of the North Shore Channel from the North Side Sewage Treatment Works to Lake Michigan and the stretch of the Calumet River from the O'Brien Locks and Dam to Lake Michigan were upgraded from Secondary Contact and Indigenous Aquatic Life Use to General Use in Amendments to Water Quality and Effluent Standards Applicable to the Chicago River System and Calumet River System, R87-27 (May 19, 1988). *Id.*, citing R87-27. The main branch of the Chicago River was not included in the Secondary Contact and Indigenous Aquatic Life Use in R71-14 but was included in a list of waters exempt from the Public and Food Processing Water Supply Use designation in Rule 303. *Id.*, citing 35 Ill. Adm. Code 303.

“Secondary Contact” means any recreational or other water use in which contact with the water is incidental or accidental and the probability of ingesting water is minimal. SR at 19. Activities such as fishing, commercial and recreational boating and other shoreline activities where contact is minimal are considered secondary contacts. *Id.* One common characteristic of the waterbodies designated as Secondary Contact in Northeastern Illinois is that the waterbodies were engineered to reverse the flow of the Chicago River. *Id.*

When the Board adopted the Secondary Contact use category in R 71-14, the waters designated as secondary contact had the following characteristics:

- 1) Routinely dredged and maintained channels, including steep-sided cross-sections designed to accommodate barge traffic and optimize flow.
- 2) Significant sludge deposition, as a result of combined sewer overflows, industrial waste discharges and urban runoff. Sludge depth in the channel system can reach five feet or more despite dredging.
- 3) Flow reversal projects, such as this one, place a premium on head differential. The entire system has minimum slope and, consequently, low velocity, stagnant flow conditions. Because of international agreements on the use of Lake Michigan water, diversion to maintain flow in the system is kept as low as possible.
- 4) Urban stress is significant within the entire drainage area. There was essentially no recreation potential with most adjacent property commercially owned and access limited.
- 5) Good physical habitat for aquatic communities in the main channel was nonexistent due to the impact of commercial and recreational watercraft use of the system as well as sludge deposition. Watercraft lockage through the Chicago River Control Works averages 25,000 vessels annually; most activity occurs during the summer months.
- 6) In addition to the above human-made and irretrievable modifications, the CAWS also carries a massive wastewater load including combined sewer overflows during wet weather. During the summer periods, a small “discretionary diversion” of Lake Michigan water is permitted to minimize the combined effects of waste load from the municipal and industrial discharges to the system and poor assimilative capacity. SR at 19-20

### **CLEAN WATER ACT AND FEDERAL REGULATIONS**

The proposed rulemaking is intended to meet certain obligations of the State of Illinois under the Federal Water Pollution Control Act (Clean Water Act or CWA) (33 U.S.C. § 1313). SR at 3. Section 303 of the CWA requires that a state periodically (at least once each three year period beginning with October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards, and to modify the standards as necessary (33 U.S.C. § 1313(c)(1)). *Id.* The national goal of the CWA is to attain “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for the recreation in and

on the water. . .” (33 U.S.C. § 1251(a)(2)). *Id.* This is commonly known as “fishable and swimmable” goal. SR at 3.

Under the federal regulations, the phrase “water quality standards” includes both the establishment of designated uses for intrastate waters and the promulgation of necessary criteria to protect these uses. SR at 3-4. Therefore, IEPA’s triennial review includes the designation of uses for specified waters and the establishment of numeric and narrative criteria intended to protect these designated uses. SR at 4. Through the federal regulations, USEPA has provided six minimum requirements for State water quality standards under 40 C.F.R. § 131.6. The six requirements are:

- (a) Use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the [Clean Water] Act.
- (b) Methods used and analyses conducted to support water quality standards revisions.
- (c) Water quality criteria sufficient to protect the designated uses.
- (d) An antidegradation policy consistent with §131.12
- (e) Certification by the State Attorney General. . .that the water quality standards were duly adopted pursuant to State law.
- (f) General information which will aid [U.S. EPA] in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the [Clean Water] Act as well as information on general policies applicable to State standards which may affect their application and implementation. 40 C.F.R. § 131.6

In addition, USEPA has outlined procedures for designating uses and conducting use attainability analyses, permitting states to adopt sub-categories of a use with appropriate criteria as well as seasonal uses. SR at 5, citing 40 C.F.R § 131.10. To remove a designated use or establish a use other than the CWA aquatic life and recreational goals, States must consider six Use Attainability Analysis (UAA) factors to adopt such a use. SR at 5, citing 40 C.F.R § 131.10(g). The six UAA factors are:

- 1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
- 2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use. . .; or
- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
- 5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the

- like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
- 6) Controls more stringent than those required by sections 301(b) and 306 of the Act [CWA effluent standards] would result in widespread economic and social impact. 40 C.F.R § 131.10(g).

In addition to the six UAA factors, States are prohibited from removing or downgrading uses that are existing uses (as of November 28, 1975) currently being attained or that could be attained by implementing the CWA effluent limits. SR at 6, citing 40 C.F.R. § 131.10. The IEPA describes the UAA as a federal model for conducting a structured scientific assessment of the factors affecting the attainability of uses by taking into consideration physical, chemical, biological, and economic factors. Exh. 1 at 5-6.

After designating uses, States establish criteria sufficient to protect these uses pursuant to 40 C.F.R. § 131.11. SR at 6. States must establish criteria, for the relevant parameter, that protect the most sensitive use and must address all parameters necessary to protect the use. *Id.*, citing 40 C.F.R. § 131.11(a). States must also specifically address toxic pollutants through numeric or narrative criteria as well as adopt a statewide antidegradation policy and methods for implementing that policy. SR at 6, citing 40 C.F.R. § 131.11(b), 131.12. Illinois' statewide antidegradation policy can be found in the Board's regulations at 35 Ill. Adm. Code 302.105

In addition to reviewing the numeric criteria or standards for particular pollutants, states are also obligated to review the designated uses portion of water quality standards every three years where a use has been established that does not meet the CWA aquatic life goal or recreational goal. SR at 7, citing 33 USC § 1251(a)(2).

According to IEPA, waters in Illinois designated for General Use can attain the CWA goals, and the waters designated for Secondary Contact and Indigenous Aquatic Life Uses are incapable of attaining CWA aquatic life and recreational goals. SR at 7. IEPA notes that this proposal includes rulemaking changes to update the designated uses and criteria necessary to protect such uses for the waters currently designated as Secondary Contact and Indigenous Aquatic Life Uses in 35 Ill. Adm. Code 303. *Id.* The standards adopted by the Board to protect this use are currently found in 35 Ill. Adm. Code 302, Subpart D. *Id.*

### **USE ATTAINABILITY ANALYSIS FOR CAWS AND LDPR**

The Board will begin with a discussion of the UAA process and follow with a summary of the CAWS UAA. The Board will conclude this section with a summary of the LDPR UAA.

#### **Use Attainability Analysis Process**

The IEPA undertook the UAA for the CAWS and LDPR to examine the current Secondary Contact and Indigenous Aquatic Life Use designated waterway reaches, and determine whether a use upgrade for balanced aquatic life and contact recreation are attainable. Attach. B at 2-2. Secondary contact means any recreational or other water use in which contact with the water is either incidental or accidental and in which the probability of ingesting

appreciable quantities of water is minimal. Secondary contact activities include fishing, commercial and recreational boating (e.g. canoeing and hand-powered boating activity) and any limited contact incident to shoreline activity. The IEPA describes the Secondary Contact and Indigenous Aquatic Life Use waters as “those waters not suited for General Use activities (fishable & swimmable), but which are appropriate for all secondary contact uses and are capable of supporting indigenous aquatic life limited by only by physical configuration of the body of water, characteristics and origin of the water and the presence of contaminants in the amount that do not exceed the water quality standards in 35 Ill. Adm. Code Subpart D.” SR at 19.

The UAA also examined whether a downgrade of the General Use reaches are appropriate. IEPA started the UAA process for the LDPR in March 2000 and for the CAWS in September 2002, respectively. SR at 21-22. The following waterway segments are currently designated as General Use: the Northshore Channel upstream of MWRD’s Northside WRP; the main branch of Chicago River; and the Calumet River upstream of O’Brien Lock and Dam. The UAA for LDPR was completed in December 2003 and the CAWS UAA was completed in August 2007. In the following sections, the Board will summarize the UAA findings for CAWS and LDPR, as those findings pertain to the Recreational Use designations.

### **CAWS UAA**

The CAWS UAA was performed by the consulting firm Camp, Dresser and McKee (CDM) over a five-year period. The process started in September 2002 when the IEPA convened a Stakeholder Advisory Committee. This committee was comprised of a cross-section of the community likely to be impacted by any changes to the CAWS regulatory regime including environmental groups, local governments, specific industries, industry trade associations, and regulatory agencies. SR at 22 citing Attach. E & G. The UAA report notes that the stakeholders have “a vested interest in the future of the Chicago area waterways and have participated as valuable stakeholders in the UAA. Their wisdom, vision, dreams, and aspirations for CAWS have been taken into consideration in this UAA.” Attach. B at 2-1. In the following sections, the Board will provide a summary of the UAA objectives, existing conditions of the CAWS, characterization of the waterway reaches, proposed use classification, and long-term goals. As noted above, the following summary of the UAA will be limited to recreational uses.

### **CAWS UAA Objective**

The CAWS UAA focused on the Calumet and Chicago River basin waterway reaches currently designated by the Board as the Secondary Contact and Indigenous Aquatic life Use and selected General Use waterways. Attach. B at 3-1. The primary purpose of the UAA was to evaluate the existing conditions and uses, and anticipated future uses to determine if revisions to use designations are warranted, particularly to protect the anticipated expansion of recreational activity occurring in the waterways. Attach. B at 2-5. The UAA also evaluated whether an upgrade of Secondary Contact and Indigenous Aquatic Life Use is achievable, and the downgrade of the General Use reaches is appropriate. *Id.* at 2-5. Further, the IEPA notes that

the UAA was intended to assess the factors limiting the potential uses and evaluate whether or not those factors can be controlled through appropriate technology and regulations. SR at 23.

Specifically, the UAA study included review and evaluation of five to ten years of environmental data to determine the physical, chemical and biological conditions of the waterway, identification and characterization of major stressors on the system, assessment of options for reducing or eliminating system stressors, and development of recommended use designations and associated water quality criteria. Attach. B at 2-5 – 2-6.

### **CAWS – Existing Conditions**

The UAA notes that the CAWS consists of 78 miles of man-made canals and modified river channels, which provide drainage for urban storm runoff, treated municipal wastewater effluent, and support commercial navigation, recreational boating, fishing, streamside recreation, and aquatic life habitat for wildlife. Attach. B at 3-2. The CAWS watershed is comprised of the Chicago River and Calumet River sub-watersheds which cover approximately 740 square miles. *Id.* In order to characterize the existing conditions and assess use classifications, the CAWS was divided into 14 reach segments. *Id.* at 4-1. CDM notes that the reach segments were “defined to have break points at critical locations that contribute to their unique characteristics so that each reach was fairly homogeneous with regard to its physical, chemical, and biological properties.” *Id.* The reach segments along with their current use designation are listed in Table 1, below. *Id.* at 3-1. The existing conditions of the CAWS were characterized in the UAA process by evaluating the physical, chemical, biological and waterway use data. In this regard, CDM relied on available data collected by various agencies<sup>1</sup> over the past decade. The description of the CAWS UAA reaches along with existing recreation and navigational uses are summarized in Table 2.

**Table 1**  
**CAWS UAA Study Waterway Reaches**

<b>Waterway Reaches</b>	<b>Description</b>	<b>River System</b>	<b>Current Use Designation</b>
Upper North Shore Channel (NSC)	Wilmette Pumping Station to North Side WRP	Chicago	General Use
Lower NSC	North Side WRP to confluence with NBCR	Chicago	Secondary Contact
North Branch Chicago River (upper & Lower) (NBCR)	confluence with NSC to confluence with the SBCR	Chicago	Secondary Contact

<sup>1</sup> The agencies solicited for data included the District, IEPA, USEPA, US Army Corps of Engineers, US Geological Society, Illinois State Water Survey, Friends of Chicago River, Lake Michigan Federation, City of Chicago, NIPC, Illinois Department of Natural Resources, Midwest Generation, Fish and Wildlife Service, Illinois State Geological Society, National Weather Service and local marinas.

Chicago River	CRCW to confluence with NBCR and SBCR	Chicago	General Use
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**Table 1**  
**CAWS UAA Study Waterway Reaches (cont.)**

<b>Waterway Reaches</b>	<b>Description</b>	<b>River System</b>	<b>Current Use Designation</b>
South Branch Chicago River (SBCR)	Confluence with Chicago River to confluence with CSSC at Damen Ave. Bridge	Chicago	Secondary Contact
South Fork of SBCR	Racine Avenue pumping station to confluence with SBCR	Chicago	Secondary Contact
Chicago Sanitary & Shipping Canal (CSSC)	Confluence with SBCR at Damen Ave. Bridge to LPL	Chicago	Secondary Contact
Calumet-Sag channel	Confluence with Little Calumet to confluence with CSSC	Calumet	Secondary Contact
Little Calumet River (west)	Calumet WRP to confluence with Calumet-Sag Channel	Calumet	Secondary Contact
Little Calumet River (east)	O'Brien Lock and Dam to Calumet WRP	Calumet	Secondary Contact
Grand Calumet River	Illinois State Line to confluence with Little Calumet River	Calumet	Secondary Contact
Lake Calumet	Lake Calumet	Calumet	Secondary Contact
Calumet River	Lake Michigan to the confluence with the Little Calumet River	Calumet	General Use up to O'Brien Lock and Dam, and the remaining segment is Secondary Contact

CRCW – Chicago River Lock and Controlling Works

LPL – Lockport Powerhouse and Lock

WRP - Water Reclamation Plant

**Table 2**  
**CAWS UAA Waterway Segments**

<b>Waterway Segment</b>	<b>River System</b>	<b>Length (miles)</b>	<b>Depth (feet)</b>	<b>Width (feet)</b>	<b>Stream banks</b>	<b>Land Use Along the Reach</b>	<b>Existing Uses</b>
<b>North Shore Channel (Upper &amp; Lower)</b>	Chicago	7.7	5-10	90	Submerged shelf transitions to steep earthen side slope	Narrow park land corridor	Shoreline activities -Walking, fishing, biking, jogging
<b>North Branch Chicago River</b>	Chicago	7.7	10-15	150-300	Vertical dock walls, steep earthen side slopes	Commercial, industrial, recreational, parks, openlands	Fishing, canoeing, paddling, boating
<b>South Branch Chicago River (SBCR)</b>	Chicago	4.5	15-20	200-250	Vertical dock walls	Industrial, commercial	Fishing, boating, and canoeing
<b>South Fork of SBCR</b>	Chicago	1.3	3-13	100-200	Steeply sloped earth/rock materials	Industrial, commercial, residential	Commercial barge, Recreational activities at the confluence of SBCR
<b>Chicago River</b>	Chicago	1.5	20-26	200-250	Primarily vertical walls	Commercial, residential	Recreational Boating, canoeing, kayaking
<b>CSSC</b>	Chicago	31.1	10 - 27	160-300	Vertical wall/steep embankments	Industrial, commercial	Commercial barge and recreational power boats
<b>Calumet-Sag channel</b>	Calumet	16.2	10	225	Vertical wall in some sections on north bank	Forest preserves, continuous band of trees on both banks	Commercial barge and recreational power boats

**Table 2**  
**CAWS UAA Waterway Segments (cont.)**

<b>Waterway Segment</b>	<b>River System</b>	<b>Length (miles)</b>	<b>Depth (feet)</b>	<b>Width (feet)</b>	<b>Stream banks</b>	<b>Land Use Along the Reach</b>	<b>Existing Uses</b>
<b>Little Calumet River</b>	Calumet	6.9	12	250-350	Earthen side slope with few sections of vertical walls	Heavy industry with some open space and forest preserve areas	Commercial barge and recreational boats and some shoreline fishing
<b>Grand Calumet River</b>	Calumet	3	2	-	-	Natural vegetation	Shoreline fishing
<b>Calumet River upstream of O'Brien Lock and Dam</b>	Calumet	8	27	450	Sheet pile , concrete walls and rip-rap	Hazardous and non hazardous landfills with little vegetation	Commercial barge and recreational boats
<b>Lake Calumet</b>	Calumet	-	-	-	-	Heavy industry, landfills	-

### **Recreation and Navigation Uses – Data Collection**

CDM notes that an assessment of existing CAWS data identified critical data gaps pertaining to waterway uses, habitat, sediment toxicity, Lake Calumet, and *E. Coli* bacteria, particularly characterizing wet weather, non-point sources and combined sewer overflows loadings. Attach. B at 4-5. Additional field data was collected only when necessary to “fill significant and high priority data gaps.” *Id.* at 4-2. The data acquisition pertained to: water quality data, sediment quality data, biological, habitat and aesthetics data, hydrologic and meteorological data, waterway use data, and geographical information system data. *Id.* at 4-3 – 4-4. While additional data was collected to address the informational deficiencies, the Board will focus on waterway use data, which include information on recreation and navigational uses of CAWS. CDM used the following four survey methods to collect recreation and navigational waterway use data for all the reaches in the study area:

- 1) Request for quantitative waterway use data from Stakeholders and meeting attendees.
- 2) Postcard informational survey of marinas on the waterway.
- 3) Letter soliciting information concerning ongoing and near future development plans affecting uses along the waterway from municipalities and other public entities adjacent to or owning land along the CAWS.
- 4) Collect waterway use data by traveling each reach of the waterway by boat. *Id.* at 4-6.

The UAA study notes that the field surveys of the waterways were conducted during the recreational season from July through October 2003. *Id.* The stakeholders assisting CDM with the field survey included IEPA, the District, USEPA and the Lake Michigan Federation.

### **Recreation and Navigation Uses – Survey Results**

The recreational use surveys evaluated six categories of recreational activities, including: swimming, diving or jumping, skiing or tubing, wading, canoeing, sculling, or hand-powered boating activity (paddling), fishing, and power boating. Attach. B at 4-24. The survey teams counted the number of times each category of recreational use was observed along with the percentage of all observed activities. The observed activities for the surveyed reaches of the CAWS are summarized in Table 3. The UAA report notes that waterway survey data served a critical role in the UAA process, particularly for recommending recreational use classification. *Id.* at 4-7. The results of the recreational use survey for the various reaches of the CAWS are summarized in the following sections.

**Table 3**  
**CAWS - Recreation and Navigational Use Survey Results**

Reaches	Observed Activity												
	Swimming, Diving, Jumping		Skiing or Tubing		Wading		Canoeing, Sculling, Paddling		Fishing		Power Boating		Commercial Navigation
	A	B	A	B	A	B	A	B	A	B	A	B	
<b>NSC</b>	0	0	0	0	1	1	16	21	57	73	4	5	No
<b>NBCR</b>	0	0	2	1	7	2	130	40	50	25	105	32	Yes
<b>Chicago River</b>	0	0	0	0	0	0	0	0	2	6	29	94	Yes
<b>SBCR</b>	0	0	5	3	0	0	10	6	66	39	89	52	Yes
<b>South Fork of SBCR</b>	0	0	0	0	0	0	0	0	0	0	5	100	Yes
<b>CSSC</b>	0	0	0	0	0	0	1	2	23	37	38	61	Yes
<b>Grand Calumet River</b>	0	0	0	0	0	0	0	0	2	100	0	0	-
<b>Little Calumet River</b>	1	0	6	3	6	3	0	0	145	64	68	30	Yes
<b>Calumet- Sag Channel</b>	1	0	7	3	6	3	0	0	69	34	119	59	Yes
<b>Lake Calumet</b>	0	0	0	0	0	0	0	0	9	100	0	0	No

A – Count of Observed Activities      B - % of Total Observed Activities

**North Shore Channel System (Upper and Lower).** The recreational and navigational use survey of the NSC was conducted over fourteen days between June 24 and October 1, 2003. The survey found that the observed uses were: wading, fishing, canoeing, hand-power boating, and power boating. The survey teams did not observe any commercial navigation. Attach. B at 4-24. Several educational institutions in the area, including North Park College, Northwestern University, and New Trier High School, reported recreational use from mid-March to November at the Oakton and NSC Launches. Additionally, events such as the River Rescue Day and canoe trips are held on the channel. *Id.* Also, the survey did not find any long-term development concerning recreational use activities in the NSC.

**North Branch Chicago River.** Recreational and navigational use surveys were conducted over a period of 16 days from June 17, 2003, through October 1, 2003. The observed recreational uses included skiing or tubing, wading, canoeing, sculling or hand-powered boating activity, fishing, and power boating. Attach. B at 4-44 - 4-45. The survey teams also observed boat launches, private docks, and canoe and kayak rentals in the NBCR reach. *Id.* at 4-45. The canoe and kayak rental facility estimates that the number of users launching from Skokie and Clark Park ranges from 200 in 2001 to 5,000 in 2004. *Id.* The various events taking place on the NBCR include River Rescue Day, canoe trips, the Flat Water Classic, and other restoration/beautification projects. The total number of users taking part in these events in 2002, 2003, and 2004, as estimated by the Friends of the Chicago River, is 6263. *See* Attach B at 4-45-4-46.

**Chicago River Reach.** The Chicago River recreation and navigation use surveys were conducted over a period of fourteen days between June 24th, 2003, and September 7th, 2003. Attach. B at 4-46. The uses observed included fishing and power boating. US Army Corps of Engineers' boat-locking count for this reach ranged from 15,009 in 2001 to 18,268 in 2003. *Id.* Other information regarding the reach notes kayaking, sculling, and canoeing. The Chicago River events include canoe trips and the Flat Water Classic. The Chicago River School Network estimates 10,000 people annually will be using the network's proposed canoe access on the Chicago River System year round. *Id.*

**South Branch Reach.** The recreation and navigation surveys for the SBCR were conducted over a period of fifteen days between June 24th, 2003, and October 1st, 2003. The observed uses on the SBCR were skiing, canoeing, and hand-powered boating activity. Additionally, commercial navigation was observed in areas maintained by the US Army Corps of Engineers. Attach. B at 4-47. Further, the UAA record notes activities and events including rowing by educational institutions, the River Rescue Day, and canoe trips. *Id.*

**South Fork of South Branch Reach.** The South Fork Reach of the SBCR was surveyed for recreational and navigational uses on a single day: July 15th, 2003. Attach. B at 4-48. The only activity observed in the South Fork Reach was power boating. Also, the UAA notes rowing activity by the Chicago Youth Rowing Club and Kenwood Academy. *Id.* Some of the events on the South Fork include the River Rescue Day and canoe trips.

**CSSC.** The recreational and navigational use surveys of the CSSC were conducted over a period of 28 days, between June 28th, 2003, and August 28th, 2003. Attach. B at 4-69. The

observed uses included canoeing, sculling or hand-powered boating, fishing, and power boating. *Id.* at 4-70. Additionally, commercial navigation was observed in areas maintained by the US Army Corps of Engineers. *Id.*

**Grand Calumet River.** The recreational and navigation survey of the GCR was conducted on August 13, 2003 by IEPA and CDM. Attach. B at 4-83. The only observed activity was fishing. The UAA study notes that a canoe and power boat dock was proposed at East 142nd Street in 2004.

**Little Calumet River.** The LCR was surveyed for recreational and navigational use over a period of 11 days between June 18, 2003 and August 27, 2003. The observed activities included swimming, diving, skiing, tubing, wading, fishing and power boating. Attach. B at 4-84. Additionally, commercial navigation was observed in areas maintained by the US Army Corps of Engineers. *Id.* The study also notes numerous private boat launches, marinas, canoe trips, and Lincoln Park Juniors Crew launches. *Id.* 4-85.

**Calumet-Sag Channel.** Calumet-Sag Channel was surveyed for recreational and navigational use over a period of 17 days between June 25, 2003 and August 28, 2003. Attach. B at 4-85. The observed uses on the Calumet-Sag Channel included swimming, diving, skiing, tubing, wading, fishing and power boating. *Id.* Additionally, commercial navigation was observed in areas maintained by the US Army Corps of Engineers. *Id.* Other activities on the channel include launches at Village of Alsip with 7000 launches per season and the Village of Worth with 4000 launches per season, Poker Fun Run, and recreational use at the LCR North Bank Trail at South Peoria Street.

**Lake Calumet.** The recreational and navigational use survey for Lake Calumet was conducted on July 6, 2003 and August 27, 2003. The only recreational activity observed on the lake was fishing. The study also notes that the Canoe Lake Calumet Event launched 14, 13, and 11 canoes on June 7, 2003, August 16, 2003 and June 13, 2004, respectively, from Stony Island Avenue on the north side of the Lake Calumet Shipping Canal. Attach. B at 4-86

### **UAA – Proposed Recreational Use Classification**

As mentioned previously, the UAA recommendations pertaining to recreational use classification were developed through collaborative stakeholder involvement using USEPA UAA guidelines and procedures outlined in both “*A Suggested Framework for Conducting UAAs and Interpreting Results*” by Michael and Moore (1997) for the Water Environment Federation, and the USEPA’s “*Water Quality Standards Handbook*” (USEPA 1994). Attach B at 5-1. The study relied on the six UAA factors that the state must take into consideration when conducting a UAA in order to demonstrate that the attainment of a CWA goal use is not feasible. *Id.* The study notes that “the CAWS UAA differs from most UAAs in that improving conditions are prompting a potential use upgrade for most reaches rather than the typical scenario where existing conditions are not supporting an existing designated use and are prompting consideration of a use downgrade.” In either case, the study notes that the criteria are still applicable. The specific UAA factors and the conditions affecting the ability to attain the General Use relating to recreational use in the various reaches of CAWS are summarized below.

**UAA Factors Affecting Recreational Use.** The Board will discuss each factor in turn.

**Factor 1 - Naturally occurring pollutant concentrations prevent the attainment of the use.** The UAA study notes that Lake Calumet supports an abundant breeding population of gulls and is surrounded by remnant wetlands that support other breeding and foraging shore bird activities. Attach. B at 5-1. Further, the study notes that research has shown that levels of *E. coli* in lakes and streams are highly influenced by localized contamination by birds and may not always be reflective of man-made pollution, such as combined sewer overflows or sewage discharges. In this regard, data collected by IEPA in the summer of 2004 indicate that *E. coli* levels (>126 cfu) were highest in the areas of active gull and waterfowl use and lowest in the areas of non-waterfowl use. The UAA study concludes that high bacterial counts due to natural sources may prevent Lake Calumet from becoming a whole-body contact recreation waterbody.

**Factor 3 - Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.** The UAA study notes that large portions of the CAWS are man-made canals that were constructed to convey stormwater and/or wastewater and provide for navigation. These man-made canals have steep sides, are deep draft, and have very little shallow shoreline. Attach. B at 5-2. Due to these limitations along with the access limitations placed upon most of the waterways by the District and other riparian land owners, the physical hazards in the waterways and the high use of commercial navigation traffic, the attainment of primary contact recreation is not feasible at this time. *Id.* Additionally, the UAA study notes that no communities along CAWS have plans to establish recreational facilities along the waterways to support swimming. However, the study finds that secondary contact forms of recreation, like hand-powered boating activity, canoeing, jet-skiing and recreational boating, which are not limited for the most part by human caused conditions, are attainable in the CAWs. *Id.* The study also finds that due to commercial navigation, hand powered watercraft recreation is limited in some waterway reaches. Finally, the study notes that the existing water quality conditions (high bacterial levels) can be corrected by implementing appropriate available technology. *Id.* at 5-3.

**Factor 4 - Dams, diversions or other types of hydrologic modifications preclude the attainment of the use and it is not feasible to restore the water body to its original condition or to operate such modifications in such a way that would result in the attainment of the use.** The UAA study notes that the Chicago area waterways cannot be restored to their original conditions because: the flows in the CAWS are highly regulated and original flows were diverted through man-made canals to reduce contamination to Lake Michigan in the early 1900s; and the original waterbodies that make up CAWS have been highly modified to support navigation, stormwater and wastewater conveyance and public use. Attach. B at 5-3. The study finds that the hydrologic modifications and sources of pollution can affect the attainment of primary contact recreation due to the flow regimes in CAWS.

**Factor 6 - Controls more stringent than those required by Sections 301(b) and 306 of the CWA would result in substantial and widespread economic and social impact.** The UAA study notes that economic and social factors must be taken into consideration during the UAA process in proposing water quality criteria to protect proposed designated uses. Attach. B at 5-4.

Specifically, the study states that IEPA is responsible for ascertaining where substantial and widespread economic and social impacts may occur as a result of the UAA by taking into consideration the following factors:

- 1) Financial analysis of the necessary pollution controls and their economic impacts on publicly owned pollution control discharge facilities (e.g. wastewater plants, combined sewer overflows).
- 2) The adverse impacts the affected community will bear if the entity is required to meet existing or proposed water quality criteria.

The UAA study notes that the District and Midwest Generation are conducting feasibility studies to determine the costs they would incur if they have to make modifications to their existing facilities to meet water quality criteria recommended in the UAA. *Id.* Additionally, the potential economic impact of upgrading the City of Chicago's combined sewer overflows to meet water quality criteria needs to be considered in the overall economic evaluation. Finally, the study notes that the recreational use data demonstrates that secondary contact forms of recreation (e.g. hand-powered boating activity, canoeing, fish and recreational boating) are occurring in the waterways and these uses need to be protected. *Id.* at 5-5.

### **Use Designations**

According to the UAA study, one of the main objectives established by IEPA for the CAWS UAA was the development of recommended use designations and associated water quality criteria to achieve the highest attainable uses consistent with CWA goals and Chapter 2 of USEPA's Water Quality Standards Handbook (40 C.F.R. 131.10). Attach. B at 5-5. The study states that "achieving this objective requires the development of use designations and a regulatory framework that flexibly adapts to the diverse nature" of the CAWS. *Id.* In this regard, the study notes that the current use designation of General Use and Secondary Contact and Indigenous Aquatic Life addresses aquatic life and recreational uses together without providing the possibility that a water body may be suitable for one, but not the other. According to the UAA study, one way of making the framework more specific to local conditions would be to create sub-use categories and designating them independent from one another. *Id.*

Regarding recreational use categories, the UAA study notes that the USEPA guidance supports the CWA goals of designating primary contact recreation and adopting water quality criteria to support that use, unless shown to be unattainable. Further, the study maintains that uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Clean Water Act and cost-effective and reasonable best management practices (BMPs) for nonpoint source control. Attach. B 5-10. Finally, the study notes that recreational uses can be removed if it can be shown that they are not an existing use as defined in 40 C.F.R. 131.3(e)<sup>2</sup>.

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<sup>2</sup> Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

The UAA study states that the recreational use survey results showed that primary contact recreation (i.e., swimming) was not an existing use in the waterways. According to the study, the Stakeholders Advisory Committee (SAC) reached a consensus regarding primary contact and agreed that swimming was not an anticipated or desired use within the next ten years. Thus, the UAA study does not recommend a primary contact recreation classification for the CAWS. Attach. B at 5-10. Based on the results of the recreational surveys, which showed significant secondary contact recreational activities in some reaches, SAC developed two secondary contact subcategories designed to protect these uses, Limited Contact Recreation and Recreational Navigation.

The study notes that Limited Contact Recreation protects for incidental or accidental body contact, during which the probability of ingesting appreciable quantities of water is minimal, such as, recreational boating (hand-powered boating activity, canoeing, jet skiing), and any limited contact incident to shoreline activity, such as wading and fishing. Recreational Navigation protects for non-contact activities including, but not limited to pleasure boating and commercial boating traffic operations. The study also notes that the Stakeholders agreed that the recreation season should be extended from March 1 through November 30 and that these recreational uses only required protection during that period. Attach. B at 5-10.

### **CAWS Reach Use Designation**

The UAA study relied on the stakeholders input to develop the recreational use designations for the various CAWS reaches. The stakeholders were asked about their perception of each reach of the waterway designation. Attach. B at 5-13. Further they were asked to consider anticipated uses within the next ten years and feasibility of any restoration actions that may be required to attain the assigned designation. The SAC recommendations are summarized in Table 4, below. *Id.* at 5-14.

In addition to the recommended designations, CDM developed, as a part of the UAA, a strategic plan for establishing overall priorities and associated goals and strategies for CAWS. Attach. B at 6-3. CDM notes that the plan is designed to be concise and includes essential information and viable options to support strategic actions that can be accomplished within the next ten years. Regarding the Limited Contact Recreation, the plan's goal is protect users and improve the existing water quality of the CAWS to support limited contact recreation consistent with the goals of the Clean Water Act. *Id.* at 6-4. Specifically, the objective is to control site-specific point sources of bacterial pollution and develop a plan to address combined sewer overflow events until the remaining portions of TARP is completed. With respect to Recreational Navigation, the plan establishes the objective of identifying treatment technologies that can be implemented at the Calumet and Stickney WRP to achieve lower level of effluent bacterial quality to protect commercial and recreational users from accidental exposure to high levels of bacteria. *Id.* 6-5.

**Table 4**  
**CAWS UAA Study Waterway Reaches – Proposed Use Designations**

<b>Waterway Reaches</b>	<b>Description</b>	<b>Present Use Designation Pursuant to Part 303.441</b>	<b>Proposed Use Designation From CAWS UAA</b>
Upper North Shore Channel	Wilmette Pumping Station to North Side WRP	General Use	Limited Contact Recreation
Lower North Shore Channel	North Side WRP to confluence with NBCR	Secondary Contact	Limited Contact Recreation
North Branch Chicago River	confluence with NSC to confluence with the SBCR	Secondary Contact	Limited Contact Recreation
Chicago River	CRCW to confluence with NBCR and SBCR	General Use	Limited Contact Recreation
South Branch Chicago River	Confluence with Chicago River to confluence with CSSC at Damen Ave. Bridge	Secondary Contact	Limited Contact Recreation
South Fork of South Branch Chicago River	Racine Avenue pumping station to confluence with SBCR	Secondary Contact	Limited Contact Recreation
Chicago Sanitary & Ship Canal	confluence with SBCR at Damen Ave. Bridge to LPL	Secondary Contact	Recreational Navigation
Calumet-Sag channel	Confluence with Little Calumet to confluence with CSSC	Secondary Contact	Limited Contact Recreation
Little Calumet River (west)	Calumet WRP to confluence with Calumet-Sag Channel	Secondary Contact	Limited Contact Recreation
Little Calumet River (east)	O'Brien Lock and Dam to Calumet WRP	Secondary Contact	Limited Contact Recreation
Grand Calumet River	Illinois State Line to confluence with Little Calumet River	Secondary Contact	Limited Contact Recreation
Lake Calumet	Lake Calumet	Secondary Contact	Limited Contact Recreation

**Table 4**  
**CAWS UAA Study Waterway Reaches – Proposed Use Designations (cont.)**

<b>Waterway Reaches</b>	<b>Description</b>	<b>Present Use Designation Pursuant to Part 303.441</b>	<b>Proposed Use Designation From CAWS UAA</b>
Calumet River	Lake Michigan to the confluence with the Little Calumet River	General Use up to O'Brien Lock and Dam, and the remaining segment is Secondary Contact	Recreational Navigation

CRCW – Chicago River Lock and Controlling Works

LPL – Lockport powerhouse and Lock

WRP - Water Reclamation Plant

#### **Lower Des Plaines River (LDPR) Use Attainability Analysis**

The LDPR UAA was performed by two consulting firms, AquaNova International, Ltd. and Hey and Associates, Inc. (jointly referred to as AquaNova) over a three and half-year period. The process started in March 2000 when the IEPA convened a Stakeholder Advisory Committee. This committee was comprised of a cross-section of the community likely to be impacted by any changes to the LDPR regulatory regime including environmental groups, local governments, specific industries, industry trade associations, and regulatory agencies. SR at 21. In the following sections, the Board will provide a summary of the LDPR UAA objectives, existing conditions of the LDPR, existing recreational uses, proposed use classification, and long-term goals. While the UAA study addresses physical, chemical, biological, and waterway use assessment of the LDPR, as noted above, the following summary of the UAA will be limited to issues concerning recreational use designation.

#### **UAA Objectives**

The IEPA notes that the main objective of the LDPR UAA was to “find an ecologically and recreationally attainable state that would as closely as possible approach the aquatic life and recreational goals of the Clean Water Act without causing an adverse widespread socioeconomic impact”. SR at 22. The UAA study notes that the IEPA objective intends to elevate the present lesser use of the LDPR from Secondary Contact Recreation and Indigenous Aquatic Life to a higher use for balanced aquatic life, contact recreation, and also consideration for water supply. Attach. A at 1-4. In this regard, the study states “the UAA is a legitimate means to strive for a higher use when the designated use is a lesser use than that specified by the Section 102(a) of the Clean Water Act.” *Id.* Specifically, the UAA study involved the evaluation of all available data to determine existing conditions of the waterway, determine potential to achieve and maintain higher value uses, identify and characterize significant stressors, assess activities to eliminate or

reduce system stressors, and develop recommended use designations and associated water quality standards. *Id.*

### **UAA LDPR – Existing Conditions**

The UAA study reach of the LDPR extends from the confluence of the river with the Chicago Sanitary and Ship Canal (CSSC) at the E.J.&E railroad bridge at River mile 290.1 near Lockport downstream to the Interstate 55 Highway Bridge at River mile 277.9. *Id.* at 1-7. At present the LDPR reach is designated as Secondary Contact Recreation and Indigenous Aquatic life. The UAA study notes that the entire reach is impounded and has two geomorphologically different segments: the Brandon Road Pool above the Brandon Lock and Dam (River mile 286); and a portion of the Dresden Island Pool above the I-55 Bridge.

The study describes the Brandon Road Pool segment of the LDPR as a 4-mile man-made channel, approximately 300 feet wide with varying depth between 12-15 feet. The channel is bordered on the sides by masonry, concrete or sheet pile embankment. *Id.* The Dresden Island Pool segment is 14 miles long, approximately 800 feet wide, with a varying depth of 2 to 15 feet. The study notes that the 8.1 miles reach of the Dresden Island Pool subject to the UAA study has more natural features when compared with the Brandon Road Pool. The stream meanders and has fair amount of natural shoreline and channels. The Study notes that the LDPR is a part of the Upper Illinois Waterway, which is one of the busiest inland commercial navigation systems in the nation. The Illinois Waterway includes Illinois River, portions of the Des Plaines River and the CSSC. *Id.* The entire waterway is completely channelized to a minimum depth of 9 feet and is used mostly for transport of bulk commodities. *Id.*

AquaNova characterized the existing conditions of the LDPR by evaluating the physical, chemical, and biological and waterway use data. *Id.* at 1-23. AquaNova relied on available data collected by various agencies and regulated entities, including IEPA, USGS, MWRDGC, Commonwealth Edison, and Midwest Generation. *Id.* at 2-1. Additional data concerning recreational was also collected by AquaNova as a part of the UAA. In the following sections, the Board will summarize only the waterway use information concerning recreational uses of LDPR.

### **UAA LDPR – Existing Recreational Uses**

In order to assess the existing recreational uses of the LDPR, AquaNova conducted a phone survey of several marinas, bait shops, government institutions and personnel located on or near the LDPR. *Id.* 7-38. The survey questions dealt with how the waterway was being used for recreation, the number and type of recreational boats, recreational activities observed, and impact of commercial navigation. The survey found that the LDPR reach is being used for both commercial and recreational boat traffic. While no swimming was observed in the Brandon Pool, several respondents observed occasional swimming in the Dresden Island pool, mostly downstream of the I-55 Bridge. Other activities like water skiing and tubing were reported by a few respondents in the Dresden Island Pool. *Id.* at 7-39. The USGS recreational boat traffic information for the time period spanning from April through September 2001 indicated the

number of boats passing through the locks as 1031 at Lockport, 1284 at Brandon Road, and 2622 at Dresden Island. *Id.* at 7-39.

### **UAA – Proposed Recreational Use Classification**

**Brandon Road Pool.** The UAA study recommends that Primary contact recreation should not be allowed at the Brandon Road Pool segment of the LDPR. *Id.* at 7-41. The study notes that primary contact recreation is not an existing use. Further, water access to the river along most of the Brandon Pool is prevented by steep concrete and sheet pile embankments. The main recreational facility on the Brandon Pool, the Bicentennial Park in Joliet, is not designed for primary contact recreation. *Id.* The study also notes that the existing bacterial water quality does not meet the Illinois standard for primary contact recreation. Finally, the waterway serves as a major shipping lane that occupies the entire width of the pool, raising serious safety concerns for activities such as swimming and water skiing.

Instead of primary contact recreation, the UAA study recommends two options for recreational use of the Brandon Pool. The first option involves the designation of the Brandon Pool as Non-recreational Use, except for allowing non-contact recreation boats to pass through the pool and the aesthetic enjoyment of the river by the citizens and visitors of Joliet. The study states that this recommendation would be based on “irreversible physical impediments to primary and secondary recreation in and on water due to navigation and physical features of the Brandon Pool. *Id.* at 7-42. The second option would designate the Brandon Pool as secondary non-contact recreation with an associated water quality standard based on *Escherichia Coli*. The study contends that while the recommended designation is non-contact recreation, the *E. Coli* standard would afford protection to accidental swimmers. *Id.* 7-43. AquaNova recommends the second option as the preferred option for implementation for the Brandon Road Pool. *Id.* This option would restrict primary contact, while affording some protection to accidental swimmers.

**Dresden Island Pool.** The UAA study notes that Dresden Island Pool recreational use is primarily downstream of the I-55 Bridge and includes fishing, boating, water skiing and also occasional swimming. *Id.* at 7-44. There are four marinas and a public landing downstream of the I-55 Bridge. *Id.* However, access to the Dresden Island Pool upstream of the I-55 Bridge is limited by the lack of landings and marinas, and there are no beaches. The study notes that the Dresden Pool downstream of River Mile 283 is surrounded by forests and natural lands and there is potential developing most of the Dresden Pool as a recreational area. *Id.* at 7-45. Further, the study observes that while barge traffic represents a safety concern, the river is wide enough to allow both recreation on water and commercial navigation with safety precautions of both users.

Regarding the existing use designation, the UAA study states that the Dresden Island Pool is divided by an artificial boundary at the I-55 Bridge with the segment upstream of I-55 Bridge designated as Secondary Contact Recreation and Indigenous Aquatic Life and the segment downstream of I-55 Bridge designated as General Use with primary contact recreation. *Id.* at 7-43. The UAA notes “the legal boundary makes little sense because neither the public nor the fish may be aware of it and there is obviously no sharp boundary in water quality between the two sections.” *Id.* at 7-43 - 7-44.

Again, the UAA study recommends two options for recreational use designation for the Dresden Island Pool. The first option would extend the primary recreation use and the uniform standard for pathogen to the entire Dresden Island Pool. *Id.* at 7-46. The study notes that while most recreation will continue to occur downstream of the I-55 Bridge, the upper Dresden Island Pool has natural assets that promote primary recreation especially downstream of River Mile 283. Recognizing that the expected frequency of swimming will be low and the frequency of primary contact would be also be lower than in other Illinois streams, the study recommends that the state may choose a bacterial water quality standard based on higher acceptable risk. *Id.*

The second option recommended by the UAA study would designate the Dresden Island Pool for Secondary Non Contact Recreation with Primary Use protection. *Id.* at 7-47. The study makes the argument that secondary contact designation would be appropriate, since the waterway is effluent dominated water body and is predominantly used for commercial navigation. Further, the study maintains that primary use standards are appropriate since they are attainable and infrequent primary contact use such as water skiing and swimming occurs in the waterway. *Id.* AquaNova states that the choice between the two options is a policy decision that will have an identical impact in terms of maintaining water quality since both options require primary use protection.

In addition to recommending recreational use designations for the LDPR waterway, AquaNova developed an action plan for further improvement of the LDPR. The plan addresses various issues concerning the improvement of water quality in the LDPR. Regarding recreational use, the action plan sets forth that for Brandon Pool the governing entities must post warnings, maintain railing and fencing along the pool and conduct public education to prevent the use of the pool for swimming, especially by children. *Id.* at 9-6.

## **REGULATORY PROPOSAL**

IEPA proposes to add five new definitions to Part 301 as well as substantive amendments in Part 303. SR at 25-42. In addition, with the splitting of the docket, IEPA recommends that amendments to Sections 302.402 and 303.204 be included in Subdocket A. PC298 at 14.

### **Part 301, Definitions**

IEPA proposes definitions for: “Chicago Area Waterway System” (Section 301.247), “Lower Des Plaines River” (Section 301.307), “Incidental Contact Recreation” (Section 301.282), “Non-contact Recreation” (Section 301.323), and “Non-recreational” (Section 301.324). SR at 25-26. The definitions for “Chicago Area Waterway System” and “Lower Des Plaines River” define the waterways included in the systems. SR at 25. The segments are based on the work conducted in the UAA process. SR at 25-26. The proposed definitions are:

“Chicago Area Waterway System” means Calumet River, Grand Calumet River, Little Calumet River downstream from the confluence of Calumet River and Grand Calumet River, Calumet-Sag Channel, Lake Calumet, Chicago River and its branches downstream from their confluence with North Shore Channel, North Shore Channel and Chicago Sanitary and Ship Canal. Proposed Section 301.247.

“Lower Des Plaines River” means Des Plaines River from the confluence with Chicago Sanitary and Ship Canal to the Interstate 55 Bridge. Proposed Section 301.307. *Id.*

The three definitions dealing with recreation uses were developed during the UAA process using recreational use surveys and other forms of research to determine the recreational uses taking place on the waterways. SR 25-26.

“Incidental Contact Recreation”:

means any recreational activity in which human contact with the water is incidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing; commercial boating; small craft recreational boating; and any limited contact associated with shoreline activity such as wading. Proposed Section 301.282. SR at 25.

The definition of “Incidental Contact Recreation” describes recreation activities that have a minimal probability of ingesting an appreciable amount of water. *Id.* This use activity includes “non-contact recreation” and “non-recreational” use activities as well as fishing, small craft boating and any limited contact associated with shoreline activities such as wading. SR at 31.

“Non-contact Recreation”:

means any recreational or other water use 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 direct human contact unlikely or dangerous. Proposed Section 301.323. SR at 26.

“Non-contact Recreation” is used to describe recreational activities where human contact with the water is highly unlikely or where such contact may be dangerous. *Id.* IEPA defines this use to include non-recreational uses as well as powerboat passage. SR at 31.

“Non-recreational”:

means a water body where the physical conditions or hydrologic modifications preclude primary contact, incidental contact and non-contact recreation. Proposed Section 301.324. SR at 26.

“Non-recreational” describes waterbodies where individual should refrain from any type of contact due to the conditions of the water body. *Id.* IEPA defines this use to include only commercial boat operations and large recreation boat passage with no human contact activity. SR at 31.

### **Part 303, Use Designations**

Amending Part 303 is proposed to establish three distinct recreational uses for CAWS and the LDPR. SR at 26. For each waterway segment, IEPA lists the use which applies. SR at 26-27. The IEPA included in the proposal and submitted at hearing color coded maps detailing the stream segments and the use designations for each. SR at 27, Attach H. The CAWS and LDPR consist of 13 waterbodies and five controlling structures from Lake Michigan to the Interstate 55 Bridge. SR at 27. The waterbodies are divided into several different reaches for use designations. *Id.* Those reaches are identified as:

North Shore Channel  
 North Branch Chicago River  
 Chicago River  
 South Branch Chicago River  
 South Fork tributary to South Branch Chicago River  
 CSSC, Upper Reach  
 CSSC, Lower Reach  
 LDPR, Brandon Pool Reach  
 LDPR, Upper Dresden Island Pool  
 Calumet River North Reach  
 Calumet River South Reach  
 Lake Calumet  
 Lake Calumet Connecting Channel  
 Grand Calumet River  
 Little Calumet River  
 Calumet-Sag Channel

Primary contact recreational use is the goal to be adopted for all waters under the Clean Water Act, unless a UAA factor prevents the goal. SR at 37. When one or more of the UAA factors apply a lesser use can be adopted. As discussed above, IEPA performed a UAA analysis for both the CAWS and LDPR and found that one or more UAA factor prevented the CAWS and LDPR from attaining the goal of primary contact recreation. *Id.*

#### **Section 303.102 Rulemaking Required**

Section 303.102 of the rules required that rules for designation of Secondary Contact and Indigenous Aquatic Life Uses must be adopted pursuant to the Board's procedural rule. 35 Ill. Adm. Code 303.102, SR at 30. IEPA asserts that since the Secondary Contact and Indigenous Aquatic Life Uses are being repealed this Section should also be repealed. SR at 30.

#### **Section 303.204 Secondary Contact and Indigenous Aquatic Life Waters**

IEPA proposes amending this section by changing the title and removing references to Secondary Contact and Indigenous Aquatic Life Uses. The proposed amendment generally describes the use designations and aquatic life uses being proposed. SR at 31. The proposed

amendments then cross-reference the applicable water quality standards in Part 302. *Id.* IEPA recommends that the Board propose this section for amendment in Subdocket A as the section provides “introduction to the applicability and scope of the use designations” for the CAWS and LDPR. PC298 at 15-17. IEPA notes that the section has a recreational use component and the section is necessary for the logical reading of the remaining provisions. PC298 at 17-18.

### **Section 303.220 Incidental Contact Recreation Waters**

As defined above, “Incidental Contact Recreation” is any recreational activity where human contact is incidental and the probability of ingesting water is minimal. These activities include fishing, commercial boating, small craft boating and shoreline activities with limited contact such as wading. SR at 39. IEPA placed in this category waters determined to have the highest degree of human contact of the waters reviewed in the two UAAs. *Id.* Generally, primary contact recreational activities were not found to exist in these waters. The waters which are proposed for this use are:

- a) North Shore Channel;
- b) North Branch Chicago River from the confluence with North Shore Channel to the confluence with South Branch Chicago River and Chicago River;
- c) Chicago River;
- d) South Branch Chicago River and its South Fork;
- e) Chicago Sanitary and Ship Canal from the confluence with South Branch Chicago River to the confluence of Calumet-Sag Channel;
- f) Calumet River, from Torrence Avenue to the confluence with Grand Calumet River and Little Calumet River;
- g) Lake Calumet;
- h) Lake Calumet Connecting Channel;
- i) Grand Calumet River;
- j) Little Calumet River from the confluence with Calumet River and Grand Calumet River to the confluence with Calumet-Sap Channel;
- k) Calumet-Sag Channel: and
- l) Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 Bridge. SR at 38-39.

Some of the reaches investigated are currently designated as General Use which presumes that primary contact recreation is a designated use. SR at 39. Those reaches currently designated as General Use are: Chicago River, North Shore Channel from the North Side Sewage Treatment Works to Lake Michigan, and Calumet River from the O’Brien Locks and Dam to Lake Michigan. *Id.* IEPA is removing these reaches from the General Use designation and will group them with the appropriate CAWS and LDPR segments. SR at 39-40. States may remove a designated use that is not an existing use, and IEPA has concluded that primary contact recreation has not been an existing use on any of the UAA segments designated as General Use waters. SR at 41, citing 40 C.F.R. § 131.10(g).

More specifically, IEPA notes that the recreational surveys performed for the CAWS UAA establish that primary contact recreation does not occur in the North Shore Channel and the

Chicago River. SR at 40. IEPA states that the recreational assessment for the Calumet River did not include a survey of recreational activity because of the dangers of traveling the area although no primary contact recreation is believed to occur on the Calumet River. *Id.* The area of the Calumet River from Torrence Avenue to the O'Brien Locks and Dam currently designated as General Use is being proposed as incidental contact recreation because some smaller craft boating is believed to occur. *Id.*

### **Section 303.225 Non-Contact Recreation Waters**

The area of the Calumet River, from Torrence Avenue to Lake Michigan, currently designated as General Use, is proposed as non-contact recreation use. SR at 40. As described above, "Non-contact Recreation" waters are areas where human contact is unlikely or dangerous. SR at 41. These areas are waters where pass-through commercial or recreation navigation and physical flow make direct human contact unlikely or dangerous. *Id.* IEPA has concluded that primary contact recreation and incidental contact recreation are unattainable in this reach. *Id.* IEPA states that the UAA contractors agree. *Id.*

Furthermore, this area shares the same type of deep-draft, steep-walled features found in areas proposed for non-recreational use. SR at 34. However, the presence of definitive plans for nearby public access demonstrates that this reach can accommodate recreational motor-boat passage. *Id.*

### **Section 303.227 Non-Recreational Waters**

Waters which are designated as "Non-Recreational" use are waters that primary contact, incidental contact and non-contact recreation are precluded due to flow conditions or other restrictions. SR at 42. The waters defined as "Non-Recreational" are:

- a) Chicago Sanitary and Ship Canal from its confluence with the Calumet-Sag Channel to its confluence with Des Plaines River: and
- b) Lower Des Plaines River from its confluence with Chicago Sanitary and Ship Canal to the Brandon Road Lock and Dam. SR at 41-42.

Much of the CAWS and LDPR are artificially channelized and are routinely subject to unavoidable moderate to severe watercraft passage disturbances such as wake formations. SR at 33. Wake formations are dangerous to small watercraft and coupled with vertical wall construction make recreational use dangerous. *Id.* Small craft can easily be capsized and have little to no routes for escape. The most severe physical barriers to waterway recreations exist in the CSSC from the confluence with the Calumet-Sag Channel to the LDPR. *Id.* The waterway consists of deep-draft, vertical-walled shipping channels and terminals that offer no means for human escape. *Id.* Also the land along this reach is privately owned with no area designated for public access. *Id.*

### **Section 302.402 Purpose**

IEPA recommends that the Board propose this section for amendment in Subdocket A as the section provides “introduction to the applicability and scope of the use designations” for the CAWS and LDPR. PC298 at 15-17. IEPA notes that the section has a recreational use component and the section is necessary for the logical reading of the remaining provisions. PC298 at 17-18.

### **SUMMARY OF TESTIMONY**

In the section below, the Board will summarize testimony relating to recreational use designations. The Board begins with the IEPA and follows with CASKA, Friends of the Chicago River, Victor Crivello and Openlands. The Board then summarizes ExxonMobil’s testimony followed by the witnesses for the District.

#### **Rob Sulski, IEPA**

Mr. Sulski has been employed by IEPA for 24 years and has a Masters Degree in Environmental Engineering from Southern Illinois University. Exh. 1 at 1. Mr. Sulski worked for 19 years in water pollution control regulatory compliance and became IEPA’s expert in the operations of Chicago area industries and wastewater treatment authorities as well as the CAWS. *Id.* Mr. Sulski was the project manager for the CAWS UAA and a member of the technical staff for the LDPR UAA. Exh. 1 at 2. Mr. Sulski grew up and lives in the CAWS area and has recreated in and around the CAWS both personally and professionally numerous times. *Id.*

Mr. Sulski indicated that the CAWS and LDPR have been classified in a distinct category separate from the other surface waters of the State since the inception of the Act. Exh. 1 at 2. In the early part of the twentieth century public health focus drove public work initiatives to construct sewer systems and treatment facilities. Exh. 1 at 2-3. Mr. Sulski stated that with CAWS and LDPR not only were the resources heavily stressed by chemical and biological degradation, but the physical condition was changed with the reversal of flow and addition of major new arteries directing drainage to the Illinois River Basin. Exh. 1 at 3.

Mr. Sulski testified that state and federal laws have driven the establishment of new water quality goals and aggressive water quality standards have been established for virtually all surface waters in Illinois. Exh. 1 at 3. However, CAWS and LDPR have reflected lower expectations due to the historic and ongoing urban and industrial influences. *Id.* The first wave of regulations was adopted in 1970 and while there have been minor changes to those regulations for the CAWS and LDPR; there has been no comprehensive overhaul until this proceeding. Exh. 1 at 3-4. Mr. Sulski notes that the CAWS and LDPR have been transformed over the last 30 years from a “virtual ecological wasteland . . . into an environmental asset to the community.” Exh. 1 at 3. Mr. Sulski maintains there is sound reasoning to “custom tailor water quality standards for this system” to coincide with the uniqueness of the system. *Id.*

Mr. Sulski credits many participants with assisting with the proposal. Those participants include USEPA, the District, Midwest Generation, the City of Chicago, Friends of the Chicago River and the Alliance for the Great Lakes. Exh. 1 at 4.

Mr. Sulski testified as to the UAA requirements (outlined above) and indicated that at least three of the six UAA factors preclude primary contact recreation use. Exh. 1 at 5-7. Two of those factors are:

- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use. Exh. 1 at 6-7.

Mr. Sulski also testified that UAA factor two (natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use) also applied when determining that certain reaches were classified as non-recreation. 1/28/08 Tr. at 23-24. IEPA found that factor two was an added condition, though not the primary factor in determining that the primary contact recreation use could not be achieved. *Id.* at 24-25.

Mr. Sulski elaborated on the determination that factor three supported a finding that primary contact recreation use could not be achieved. 1/28/08 Tr. at 29. Mr. Sulski noted that the human conditions that could not be remedied were “primarily with respect to downtown areas and areas that have straight-walled channels”. *Id.* Mr. Sulski stated that to rip out buildings and restore meanders through the city would be impossible. *Id.* at 31.

Mr. Sulski testified that the UAA findings are that primary contact recreation is not attainable and that for some reaches incidental and non-contact uses are not attainable due to irreversible human caused conditions described in factors three and four above. Exh. 1 at 11. Mr. Sulski testified that these conclusions support a determination that the existing uses in the waterways today are “synonymous with those uses” that can be achieved in the foreseeable future. *Id.* Mr. Sulski stated that IEPA proposes three distinct recreational uses to address the varying level of human contact with the CAWS and LDPR. *Id.*

Mr. Sulski further explained IEPA’s decision to propose changing the use designations for the North Shore Channel, Chicago River, and Calumet River. According to the IEPA, the three reaches, currently designated as General Use waters, do not support primary contact recreation. Exh. 1 at 11-12. Mr. Sulski explained that IEPA’s intention is to group these segments with other reaches of the CAWS and LDPR. Exh. 1 at 12. Mr. Sulski stated that the CAWS UAA demonstrates through recreational surveys that primary contact recreation is not occurring and is not attainable for the North Shore Channel and Chicago River. *Id.* Likewise no primary contact recreation is taking place on the Calumet River. *Id.*

Mr. Sulski responded to questions about safety and security from several participants. *See e.g.* 2/19/08 Tr. at 81-82; 3/10/08P Tr. at 13-16, 60-64, 72-75. More specifically, when asked if IEPA was aware of any deaths that had occurred in small boats that were “swamped” by the wake from barge traffic, Mr. Sulski was not aware of any incident. 1/29/08 Tr. at 73. However Mr. Scott Twait of IEPA did respond that IEPA knew of such an incident. *Id.* Mr. Twait indicated that the incident occurred in the Upper Dresden Island Pool. 1/29/08 Tr. at 74; Exh. 9. Mr. Sulski testified that the U.S. Coast Guard was consulted in designating the recreational uses on the CAWS, but not specifically on the LDPR. 1/29/08 Tr. at 81-82; 3/10/08P Tr. at 72-73; Attach. JJ.

When asked if the recreational use designations would lead to increased accidents between barge traffic and recreational users, Mr. Sulski indicated that IEPA believes there are enough areas for recreational users in the LDPR for recreational users to avoid barge traffic. 3/10/08P Tr. at 13-14 and 63. Mr. Sulski bases this belief on the maps of the area. *Id.* Mr. Twait added that IEPA is protecting the existing use and that IEPA does not believe that more people will necessarily recreate because of the use designation. *Id.* Mr. Sulski indicated that the recreational use designations proposed are consistent with shipping on the LDPR and that the recreational use designations will not impact shipping. 3/10/08P Tr. at 60-61.

Mr. Sulski did indicate that IEPA is not a “physical safety agency” and that the Chicago Police Marine Unit, U.S. Army Corp of Engineers and U.S. Coast Guard were the agencies involved. 4/24/08 Tr. at 162. Mr. Sulski conceded that one factor in the UAA analysis is the physical factors. 4/24/08 Tr. at 163.

### **Thomas Bamonte, Chicago Area Sea Kayakers Association**

Thomas Bamonte is the President of the Chicago Area Sea Kayakers Association (CASKA). Exh. 284 at 1. He is a certified kayaking instructor and regularly paddles in the CAWS. *Id.* CASKA is an organization with over 100 paying members and is one of many paddling groups that operate in the general region of the CAWS. 5/6/09A Tr. at 80. Mr. Bamonte testified regarding the extent of contact between kayakers and the water in which they are paddling.

Mr. Bamonte testified that kayakers come into contact with water in a number of different ways while paddling. For example, because kayak paddle shafts are relatively short and cockpits sit less than a foot above the water, kayakers’ hands often come in direct contact with the water while paddling. Exh. 284 at 1-2. Water also flows down the paddle shaft onto the hands and lap of the paddler as each blade of the paddle shaft is alternately raised and lowered. Exh. 284 at 2. Although kayakers often employ a protective sheet called a sprayskirt to keep this water off of the lap, water will accumulate on the sprayskirt and come in contact with the kayaker’s body when the sprayskirt is removed, including potential eye contact if the sprayskirt is removed over the head. *Id.* Additionally, water will spray into a kayaker’s face, eyes, and body as water is splashed by normal paddling motions, particularly in windy conditions. Exh. 284 at 2-3. Leaks in the kayak or sprayskirt can also contribute to the accumulation of water in the cockpit, and kayakers commonly remove this accumulated water by hand with a sponge. Exh. 284 at 3. Mr. Bamonte further explained that kayakers frequently walk or insert their hands

in the water during the process of launching or landing a kayak. *Id.* Finally, Mr. Bamonte stated that kayakers are exposed to water while wiping off and packing wet kayaks and equipment after paddling. Exh. 284 at 3-4.

In addition to the exposure risks above, Mr. Bamonte detailed a number of scenarios in which kayakers experience full-body immersion in water. He explained that the design of kayaks makes them inherently more prone to capsizing than other watercraft, and he outlined a number of scenarios which commonly cause capsizes, such as falling while maneuvering the kayak at an entry/exit point, tipping over while entering or exiting the kayak, or losing balance due to an unexpected boat wake or collision with another kayak. Exh. 284 at 4. Mr. Bamonte stated that unintentional capsizes are most common for inexperienced kayakers but occur at all experience levels. Exh. 284 at 5. He specifically noted that the CAWS is heavily used by novice paddlers because the river is sheltered from wind, provides many banks and ladders for ingress/egress, and is well-situated for paddlers to summon help, and that these sheltered conditions make capsizing less likely on the CAWS than on Lake Michigan. 5/6/09A Tr. at 68-70. While experienced paddlers can recover from a capsized in only five seconds by executing a technique called an “Eskimo roll” to re-orient the kayak from underneath, Exh. 284 at 79, novices usually recover by exiting the kayak, resulting in 1-5 minutes of immersion, Exh. 284 at 4. Mr. Bamonte additionally noted that if capsized kayakers are rescued by passersby, they will also expose their rescuers to water. *Id.*

Mr. Bamonte detailed ways in which the water quality of the CAWS affects the way CASKA uses the river system. In addition to following standard kayaking safety protocols, members of CASKA avoid full-body immersion and share a “generalized sense” to avoid paddling during combined sewer overflows, 5/6/09A Tr. at 64-66, though they circulate no specific written directions to this effect, 5/6/09A Tr. at 82. Mr. Bamonte noted that some experienced paddlers subscribe to the District’s website in order to receive information about combined sewer overflows, but this information is not always reliable. 5/6/09A Tr. at 66. He also stated that water quality concerns prevent kayakers on the CAWS from practicing activities typical of kayaking on other bodies of water, such as play or safety training involving full-body immersion, and these limitations prevent paddlers on the CAWS from enjoying all aspects of the sport and developing safety skills. 5/6/09A Tr. at 78-81. Mr. Bamonte mentioned that at present kayakers do not consider any particular part of the CAWS off limits, and he believes that some kayaking occurs in the area reaching from the CSSC and the Calumet-Sag Channel to the O'Brien Lock and Dam, which the proposed regulations designate as non-recreational. 5/6/09A Tr. at 76-77

### **Margaret Frisbee, Friends of the Chicago River**

Ms. Frisbie is the executive director of Friends of the Chicago River (“Friends”), a nonprofit organization whose purpose is to promote the improvement of the Chicago River system for both wildlife and local human communities. Exh. 259 at 1. She testified in support of the IEPA’s recommendations for improved water quality standards for the Chicago River system. Ms. Frisbie’s testimony gives evidence of the ways in which the river is used by Friends and the public, safety guidelines observed by Friends while using the river, recent improvement

and development of the river system, and various expressions of support from the public for measures to improve the water quality of the river.

Friends organize a number of programs and events that bring members of the public in contact with the CAWS. Exh. 259 at 1. Since 1998, their Urban Canoe Adventures Program has brought at least 2,640 people for volunteer-lead canoe trips on the CAWS. Exh. 259 at 3. The organization has also supported the establishment of canoe and kayak liveries that rent boats in some parks in Chicago and Skokie. *Id.* In addition to their own projects, Friends is contracted by the Chicago Park District to administer educational canoe programs utilizing Park District boat launches at river-edge parks. Exh.259 at 4. Finally, each year, the organization coordinates two major events: Chicago River Day, a day of service during which volunteers clean riverbanks and build river-edge trails, and the Chicago River Flatwater Classic, a canoe and kayak race supported by the US Coast Guard and Chicago Marine Police and sponsored by a number of corporations. Exh.259 at 2-3. The Flatwater Classic is in its 10th year and has involved about 4600 participants to date. 5/6/09A Tr. at 37-38.

Friends observe a number of safety protocols in the course of conducting these programs, though Ms. Frisbie noted that Friends only accounts for a small fraction of all CAWS users, who may not all follow such precautions. 5/6/09A Tr. at 6-7. Ms. Frisbie stated that Friends observes the safety protocols established by the United States Canoe Association, as well as a CAWS Health Precaution Brochure published by the District, the Illinois Department of Health, the USEPA and the IEPA. *Id.* (*see also* Exhs. 260 and 261). These protocols include water quality precautions such as washing hands and avoiding physical contact with water, among others. 5/6/09A Tr. at 11. According to Ms. Frisbie, Friends guides are trained in these protocols and told to instruct guests of the precautions. 5/6/09A Tr. at 11-12. Due to water quality concerns, Friends does not take guests onto the river within 24 hours of a combined sewer overflow. 5/6/09A Tr. at 20. Ms. Frisbie denied that Friends advises boaters to avoid using any area of the river because of danger from barge traffic or insufficient points of egress, 5/6/09A Tr. at 16-17 (*see also* Exh. 265 and 266), and also stated that the risk of capsizing on the CAWS is no greater than that of bodies of water such as Lake Michigan, 5/6/09A Tr. at 33-34.

Besides the uses of the CAWS by Friends which Ms. Frisbie detailed, she also emphasized that the river is used by many other individuals. As examples, she cited the docks on the river which have been built by the City of Chicago, the Chicago Park District, the Army Corp, and the Skokie Park District. 5/6/09A Tr. at 23. She also noted that Friends has experienced a drop in participation in programs due to competition from canoe and kayak rental companies, some of whom estimate having rented to thousands of customers. 5/6/09A Tr. at 29-30 (*see also* Exh. 268). Ms. Frisbie observed that the CAWS is used by a number of crew teams, as well. 5/6/09A Tr. at 30-31 (*see also* Exh. 269).

Ms. Frisbie also testified regarding the development of a number of plans throughout the years to improve the Chicago River for various recreational, ecological and commercial purposes. Exh. 259 at 4-5. Ms. Frisbie described various developments on the CAWS such as the construction of multi-use trails, boat docks, paddling launches, fishing stations, play lots, water trails, and wildlife habitats, as well as increased encouragement of bird watching. 5/6/09A Tr. at 43-45 (*see also* Exhs. 271, 272, 273, 274, and 275). Ms. Frisbie stated that the City of

Chicago has spent \$73 million on these projects in the past ten years, and the Chicago Park District has spent over \$22 million. 5/6/09A Tr. at 40 (*see also* Exh. 271 and 274). In particular, Ms. Frisbie discussed the City of Chicago's 2005 "Chicago River Agenda," and noted that, besides planning ecological improvements, various recreational amenities, and community involvement, the plan encourages effluent disinfection and improving water quality of the Chicago River. 5/6/09A Tr. at 5-6 (*see also* Exh. 276).

Ms. Frisbie shared a number of ways in which the general public has expressed support for improving water quality standards. She stated that 180 individual letters had been filed by various individuals, organizations, and elected officials in support of effluent disinfection and protections for fish. Exh. 259 at 6-7, 5/6/09A Tr. at 48. The majority of these letters were filed by non-Friends members, and none were filed by Friends employees. 5/6/09A Tr. at 48-49 (*see also* Exh. 278). In June 2008, the Board held a public hearing on the proposed recommendations which drew more than 100 attendees, 43 of whom spoke in support of the measures. Exh. 259 at 7. The editorial board of the *Chicago Sun-Times* also expressed support. *Id.* Ms. Frisbie further testified that, in an online survey administered by Friends, 73.3% of respondents said they believed their health was at risk when they recreated on the river, 14% said they thought they "got sick" from using the river, and 90% said they would seek out additional recreational opportunities if the water quality of the Chicago River were dramatically cleaner. *Id.*

Finally, Ms. Frisbie testified anecdotally about other assorted uses of the CAWS and their relationship to water quality standards. She stated that she and her co-workers had seen toddlers and children swimming and wading in the CAWS at various parks and in the Chicago Sanitary and Ship Canal, Exh. 259 at 7. She presented pictures of individuals wading and fishing on the CAWS, 5/9/09A Tr. at 50-51 (*see also* Exh. 279). She also referenced a *Chicago Tribune* article written by a reporter who was served lunch from a downtown restaurant while floating in a kayak. Exh. 259 at 7.

### **Victor Crivello**

Mr. Crivello is a resident of a southeastern Chicago neighborhood and has worked on numerous environmental engineering, construction and community projects over the past 30 years. Exh. 330 at 1. He testified in support of the proposal by IEPA to regulate disinfection of wastewater treatment plants along the Calumet River System. Mr. Crivello's testimony gives evidence of past and ongoing recreational uses of the Calumet River System.

Since at least 1984, Mr. Crivello has owned boats, including a sailboat and a cabin cruiser, which he has regularly piloted and docked within the Calumet River System. Exh. 30 at 1. Since 1975, he noticed increased recreational boat traffic, including small boats, and a large, growing boating community along the Calumet River System. 10/5/09 Tr. at 7, 18-19, 57. He attributed this growth at least in part to the closing of many industrial sites along the river and the consequent reductions in pollution and improvement in water quality. 10/5/09 Tr. at 56-57. He also noticed growth in riverside businesses such as restaurants and marinas, as well as heightened coast guard surveillance and the recent development of a housing community with river access. 10/5/09 Tr. at 3. Mr. Crivello noted that the Calumet Channel has hosted numerous fishing tournaments, that the Calumet-Sag Channel has been used for rowing training since 2006,

that high school and college students now row there on a daily basis, and that a NCAA Division 1 women's rowing competition ("Southland Regatta") was held there in November, 2007. *Id.* Mr. Crivello demonstrated his familiarity with the Calumet River System by pointing out specific landmarks on maps of the Calumet River System (Exhs. 331, 332). 10/5/09 Tr. at 8-10.

Mr. Crivello stated that he observed waterway uses primarily between Ashland Avenue east along the Grand Calumet River, and has himself often recreationally sailed south from Lake Michigan to the O'Brien Lock and Dam, and west to the I & M Canal. 10/5/09 Tr. at 20-21. He observed recreational tubing near the marina where he docks his boat and the O'Brien Lock and Dam (flag 2 on Exh. 331). He also observed youth swimming in the Little Calumet River (near flag 5 and between flags 1 and 12 on Exh. 331) somewhat less than 20 times over the years. 10/5/09 Tr. at 22-23.

Based on his experience and observations, Mr. Crivello stated that the O'Brien Lock and Dam and the Calumet, Grand Calumet and Little Calumet Rivers are currently being used by the public, and that apart from six-mile channel north of the Dam, which is often congested with boat traffic, the waterways are safe for public use. 10/5/09 Tr. at 25-27. Moreover, he believed that although many areas along the Calumet River System have steep-walled sides, there are plentiful official and unofficial public access areas along the Calumet River System, including natural banks, drainage access points and places where roads run to the river but have no bridge. 10/5/09 Tr. at 55-56. Mr. Crivello stated that, based on his experience, barge traffic generally does not prevent recreational use of the Calumet system because barges travel in the center of the channel and excepting rare commercial boat rights-of-way, there is always enough room for smaller craft to safely pass them. Exh. 330 at 2, 10/5/09 Tr. at 24. He noted that barge traffic is occasionally stopped entirely to allow for large recreational events, such as occurred during the 2007 Southland Regatta. 10/5/09 Tr. at 15. From experience with other boaters and his crew, he believed that recreational boaters who use the Calumet River System, including canoers and kayakers, have adequate boating ability and knowledge to interact appropriately with the barges. 10/5/09 Tr. at 25.

### **Gerald W. Adelman, Openlands**

Mr. Adelman is the Executive Director of Openlands, which is a conservation organization that works with local governments to preserve and enhance open space throughout the Northeastern Illinois Region. Exh. 354 at 1. He testified in support of the proposed water quality standards and disinfection. *Id.* Mr. Adelman stated in his pre-filed testimony that the City of Chicago and other communities have spent billions of dollars on river system projects to "offer a better quality of life." *Id.* He quoted statements from Mayor Richard M. Daley and a 2000 study of the CAWS in saying that the CAWS is an important local resource that "serves as a wildlife corridor, transportation route, economic hub, recreation center and floodwater conveyance resource." *Id.* Mr. Adelman opined that "[a]dopting more stringent water quality standards furthers [local government] commitment to view the CAWS and LDPR as a valuable social and environmental resource . . ." *Id.*

Mr. Adelman described the Northeastern Illinois Regional Water Trail Plan, developed in partnership with the Illinois Paddling Council and the Northeastern Illinois Planning

Commission. Exh. 345 at 2. The plan calls for 480 miles of water trails and 174 access points. *Id.* Mr. Adelman stated that Openlands is committed to helping water trail providers make paddling safer for those who use the trails, including advocating for higher water quality and disinfection of Chicago area wastewater. *Id.*

Mr. Adelman stated that Chicago has a long history of preserving land for recreational use, beginning in 1974 with the 60-mile Illinois and Michigan Canal State Trail preserve along the Illinois and Michigan Canal between Joliet and LaSalle. Exh. 354 at 2. In the 1970s, Mr. Adelman was personally involved in supporting a bill that President Reagan ultimately signed in 1984 to designate a 100-mile region from LaSalle/Peru to Chicago as a National Heritage Corridor. *Id.* The Corridor includes the Calumet-Sag Channel and part of the Chicago River, which are included in this rulemaking. *Id.*

Mr. Adelman stressed the ecological importance of the Corridor, stating that the Corridor contains globally threatened ecosystems and that at least twenty varieties of waterfowl migrate through the region. Exh. 354 at 2. He also highlighted the importance of restoring Jackson Creek, a high quality tributary to the LDPR, whose ecosystem is threatened in part by the combination of natural weather variations that harm aquatic life and a lack of connection to high quality downstream recruitment sources of fish and mussel species. Exh. 354 at 3 (*see also* Exhibit 338 at 5-6).

Mr. Adelman expressed discomfort with making a statement about the safety of undisinfected water with respect to public health, though he did point out that Openlands posts warnings on its website admonishing CAWS paddlers not to ingest the water, not to immerse open wounds in it, to be careful when eating around the water and to practice frequent hand washing. 10/5/09 at 170-71. He believed that people would use the CAWS waterways whether or not Openlands provided warnings, and that if people follow the precautions on the Openlands site, they will “probably [be] all right.” 10/5/09 at 170. He also stated that even beyond these precautions, he thought generally that the lack of disinfection is “not great.” *Id.*

### **Laura Barghusen, Openlands**

Ms. Barghusen is the Associate Greenways Director for Openlands, where she has served since 2004, following her Master of Arts in Environmental and Urban Geography at the University of Illinois at Chicago and her Master of Science in Zoology at Miami University. Exh. 338 at 1. Openlands join with state agencies, local governments and other organizations to increase recreational use of Chicago area waterways. Exh. 338 at 1 (*see also*, Attachment to Exh. 338 (curriculum vitae)). The Greenways Department increases waterway use by installing canoe and kayak access points, raising public awareness, coordinating training for citizens to monitor water and advocating for improved water quality. *Id.* On a broader scale, Openlands carries out the goal of enhancing water bodies to fishable and swimmable conditions by assisting local government and citizens to improve water quality through watershed planning and restoration projects. *Id.*

Ms. Barghusen’s testimony described several forms of evidence that are indicators of increasing recreational use of the CAWS, and that are indicators of potential habitat use of the

CAWS. This evidence includes established and planned paddle craft launch sites, a survey of paddlers and paddle industry information, and biological evidence from water bodies downstream from a District facility.

With help from Mr. Adelman, Ms. Barghusen clarified Openlands' role in this proceeding. Mr. Adelman stated that Openlands does not actively promote the recreational use of the undisinfected waters, but rather took on the role of coordinating site planning for boat launches. 10/5/09 Tr. at 158-160. Openlands intended to enable safer public access to the CAWS in partnership with Northeastern Illinois Planning Commission because a complicated system of public agencies, forest preserves and park districts had set up a disorganized system of water trails, the safety of which was compromised by the long distances between channel access sites. 10/5/09 Tr. at 162. Mr. Adelman further stated that Openlands does not own, manage or promote access to the CAWS, nor does Openlands ultimately choose sites or build on them. *Id.* Openlands does facilitate regional planning efforts and land conservation organization, which Mr. Adelman stated has been especially important given that people are already using the waterways, albeit in ways that may not be entirely safe. 10/5/09 Tr. at 163.

### **Existing and Proposed Launch Sites**

Ms. Barghusen specified the locations of established and proposed small water craft launch sites, stating that there are 6 sites on the North Shore Channel and North Branch of the Chicago River, 45 private docks along the North Branch, and 11 marinas and 8 launch sites within the Calumet River System. Exh. 338 at 3-4. She stated that the Chicago River's main stem and north and south branches are already heavily used by paddlers, and that paddlers sometimes use the stem and branches to access other non-CAWS waterways such as the Skokie Lagoons. 10/5/09 Tr. at 135. She clarified that especially heavily used areas are distinguished by "liveries," or paddle boat rental shops, which allow people who do not own boats to use the water trails. 10/5/09 Tr. at 136. A company called Chicago River Canoe and Kayak currently operates a livery at Clark Park, which is about a mile and a half south of River Park on the north branch of the Chicago River. 10/5/09 Tr. at 136-37. Chicago River Canoe and Kayak operates another at Oakton Street on the North Shore Channel. 10/5/09 Tr. at 137. A third livery owned by Kayak Chicago is located at North Avenue on the Chicago River near the main stem. 10/5/09 Tr. at 150.

Ms. Barghusen also referred to a map originally submitted with her pre-filed testimony entitled "Chicago Area Waterway System Recreational Access Points and Proposed Uses," which was enlarged at scale for hearing and entered as Exhibit 346. 10/5/09 Tr. at 137, 142. The map showed the CAWS and waterways outside the CAWS, including the Skokie Lagoons. 10/5/09 Tr. at 137. Ms. Barghusen described the various markings on the map, stating that a red star with a white outline indicates an established access point; a yellow star with a white outline indicates an unimproved launch, that is, a site that is informally used as a launch but has not been developed; stars with white centers indicate sites for which launch construction has been proposed; and red stars with a black outline indicate launches that exist but that are not included in the water trail plan. 10/5/09 Tr. at 139-42. Ms. Barghusen stated that the points were placed on the map using GIS, USGS and USEPA hydrography data. 10/5/09 Tr. at 142-43. Some corrections were made to the pre-filed map based on a July, 2009 verification boat trip done by

Ms. Barghusen and Friends of the Chicago River. 10/5/09 Tr. at 142-43. These included relabeling a site at Whistler Preserve as a stream side point instead of an access point; adding a site on the south branch at Lawrence Fishery that has recently become a public access site; and consolidating two sites mistakenly indicated separately as Alsip and Howe's Landing, which are in fact two names for the same site. 10/5/09 Tr. at 141-42.

### **Public Opinion Survey of Recreational Users**

Ms. Barghusen then described a public opinion survey of recreational paddlers that Openlands sent to 1,500 randomly selected Illinois households with registered non-motorized watercraft. Exh. 338 at 4. The survey was also available in electronic format to water trail users through the Friends of the Chicago River website. 10/5/09 Tr. at 186. Openlands received 250 responses altogether. 10/5/09 Tr. at 187. Ms. Barghusen stated that 34% of these paddlers used the North Branch Chicago River in 2005, which amounts to 291 trips by survey responders on the North Branch during that year. Exh. 338 at 4. Seventy-six of the survey respondents also indicated that they accessed the CAWS at Clark Park, which is adjacent to a portion of the river that would benefit from disinfection at the District's north side plant. *Id.*

The responses indicated that most paddlers valued proximity, scenery, length of time on the water and water quality as the top four factors in deciding where to paddle, in that order. 10/5/09 Tr. at 187. The average trip time for 48 % of responders was two to four hours, and for 30 % it was four to six hours. 10/5/09 Tr. at 194. The average age of responders was 52 years old, 76 % of them had college degrees, and over half made above \$70,000 per year. 10/5/09 Tr. at 188. The top five water bodies paddled, in terms of total trips taken by responders in 2005, were the Fox River, the Upper Des Plaines, Lake Michigan, the North Branch of the Chicago River and the South Branch of the Chicago River. 10/5/09 Tr. at 192. Some of the reaches asked about in the survey are not included in the rulemaking; however, at least parts of the 17 rivers included in the survey are part of the rulemaking. 10/5/09 Tr. at 189-192. Ten of the rivers, including 480 miles of water trails and 174 access points, are part of the Openlands water trail plan. 10/5/09 Tr. at 194, 196. These include Lake Michigan, the Chicago River (including the North Shore Channel), the Des Plaines River, the DuPage River, Salt Creek, Nippersink Creek, the Fox River, the Calumet Waterways (including the Calumet River, the Cal-Sag Channel, Lake Calumet and Thorn Creek), the Kankakee River and the Kishwaukee River. 10/5/09 Tr. at 196-97 (*see* Exh. 352) (*see also* 10/5/09 Tr. at 197-98 for a detailed list of the specific boundaries of channels that are included in the rulemaking and those that are nearby or adjacent but excluded from the rulemaking). Overall, about 41 miles of water trail included in the Openlands water trail plan are included in the rulemaking, as well as 12.5 miles of trail within the Lower Des Plaines system, which itself includes one construction-proposed launch site.

Ms. Barghusen also cited increased canoe and kayak rentals as evidence of increasing recreational use of the CAWS. Exh. 338 at 5. She cited a report published by the Chicago Area Sea Kayakers Association that quoted a Chicago River Canoe and Kayak employee as saying that he rented craft for 55,000 trips on the Chicago River between opening his business in 2001 and the research for the report in 2008. *Id.* Ms. Barghusen also stated that Kayak Chicago had

logged 10,000 trips in the summer of 2008 and reported growth of about 1,000 trips per year. 10/5/09 Tr. at 150.

Ms. Barghusen stated that the area has also been used increasingly for rowing events: in November, 2007, 350 female students from Midwestern universities competed along the Cal-Sag Channel, with another similar race planned for November, 2008. *Id.* Ms. Barghusen stated that the University of Wisconsin has asked the City of Blue Island to host a Spring 2009 rowing regatta for men's and women's teams that would involve over 300 participants. *Id.* Similarly, Loyola Academy, a Wilmette high school, recently asked Blue Island to host student rowing events. *Id.*

### **Planning of Water Trails**

Ms. Barghusen described several factors that were used in the Northeastern Illinois Regional Water Trail Plan (admitted as Exhibit 345) to decide which channels to include. 10/5/09 Tr. at 131-32. These included the cost of improving a channel-adjacent site to become a launch; the type of experience a paddler would obtain on the channel from wildlife and historic architecture; and the type of traffic the paddler would encounter on that channel. 10/5/09 Tr. at 132-33. She stated that priority was placed on channels that, for example, would need only low-cost improvements in the neighborhood of \$16,000, and that channels like the Cal-Sag would be equipped with signage denoting high traffic areas that only experienced paddlers should enter. *Id. see also* Exh. 345.

### **Current and Planned Waterway Access Points**

As Ms. Barghusen identified in "Answer to MWRD Pre-filed Question Number 6A for Laura Barghusen," admitted as Exhibit 349, the goal of Openlands for the water trail plan is to have designated access points every three to five miles along the water trails. 10/5/09 Tr. at 172. Some stretches, such as the North Shore Channel and the north branch of the Chicago River, have already accomplished the goal spacing. 10/5/09 Tr. at 172-73. Other stretches, such as the channels between South Western Avenue and Summit, or between Summit and the Cal-Sag, still lack access points between existing launches that are eight to nine miles apart. 10/5/09 Tr. at 173. Ms. Barghusen stated that many canoers or kayakers would not seek to exit the waterway if they were to capsize, but would rather attempt to flip the boat and continue using the channel. 10/5/09 Tr. at 179. She stated further that barge traffic in itself "is not a reason to leave the water," and that Openlands had never received notice of barge collisions with small craft operators, or injuries resulting therefrom. 10/5/09 Tr. at 180-81.

On the other hand, Ms. Barghusen also referred to Exhibit 350, "Examples of Ladders Along the Chicago Area Waterway System," which described the location of ladders that provide access from channels up vertical seawalls. 10/5/09 Tr. at 177. The ladders could be used to steady a watercraft or to exit the waterway. *Id.* Eight of the twelve ladders described in the exhibit are located in the downtown area, along the main stem or the south branch, mainly beside bridges. 10/5/09 Tr. at 178. Exhibit 350 also identified one ladder along the Chicago Sanitary and Ship Canal, near Loomis, although Ms. Barghusen stated that she had pictures of other ladders that could not be located accurately enough to be put into evidence. *Id.*

Ms. Barghusen relied on a set of photographs entitled “Gradually Sloping Banks and Shallow Water in the Chicago Area Waterway System” and admitted as Exhibit 351, to say that the waterways included in Openlands’ water trail plan should not be characterized as “being all steep-walled, because it’s really quite a mix of steep-walled and...shallow areas...where the...banks would be conducive to getting out.” 10/5/09 Tr. at 177, 181.

### **Robert Elvert, ExxonMobil Oil Corporation**

Mr. Elvert is the state regulatory advisor for the Midwest region at ExxonMobil in Channahon. Exh. 324 at 1. Mr. Elvert testified that ExxonMobil’s refinery is located at the southern most point at the I-55 bridge of the LDPR in the area referred to as the Upper Dresden Island Pool. *Id.* Mr. Elvert stated that if the Board adopts the proposed incidental contact recreation use designation for the Upper Dresden Island Pool, the result will be an increase in recreational use. Exh. 324 at 2. The increased use raises safety and security concerns for ExxonMobil, which have been expressed throughout this process. Exh. 324 at 2 and 4.

Mr. Elvert described the recreational activity he observed on the LDPR as including motor boats of all sizes, row boats, canoes, jets skis, transit large boats, sailboats and fishing boats. 8/13/09P Tr. at 20. Mr. Elvert believes that the current recreational use of the LDPR poses a security risk to the refinery and a safety risk. 8/13/09P Tr. at 20-21. Mr. Elvert provided photographs of barges heading downstream to illustrate the concerns of ExxonMobil. 8/13/09P Tr. at 21-23, Exh. 325.

### **Safety**

Mr. Elvert opines that the designation of Upper Dresden Island Pool as incidental contact recreation will encourage and increase the use of the Upper Dresden Island Pool and consequently the increased number of recreational users may be placed in danger due to heavy barge traffic. Exh. 324 at 2-3. Mr. Elvert indicated that the barge traffic on the LDPR is constant 24-hour a day, seven days a week activity. Exh. 324 at 3. Mr. Elvert noted that in 2007, 825 barges were loaded or unloaded at the ExxonMobil refinery dock, with each barge being moved by a tugboat. *Id.* Mr. Elvert testified that the sum of these trips amounts to hundreds of trips by tugboats and over 2,400 barge movements back and forth across the width of the LDPR. *Id.* In addition to the barge movements at ExxonMobil, several other facilities along the LDPR are served by barges so that the actual barge movements could be greater. *Id.*

Mr. Elvert described the “close quarters” in which the barges and tugboats must work using the US Army Corps of Engineers Illinois Waterway charts. Exh. 324 at 3. Mr. Elvert explained that the LDPR is about 1000 feet wide at the I-55 bridge and narrows to 500 feet for most of the segment upstream. *Id.* The averaged size of a barge delivering to the refinery is 55 feet wide and 300 feet long, which leaves available water space for recreational use “considerably reduced” according to Mr. Elvert. *Id.* The area is further restricted by the common practice of storing multiple barges side-by-side along the northern shore line of the LDPR. *Id.* Mr. Elvert also expressed concerns about the increased wakes that may overwhelm small watercraft. Exh. 324 at 4.

Mr. Elvert states that IEPA has failed to address these safety concerns including letters sent by the Three Rivers Manufacturing Association during the UAA process. Exh. 324 at 4-5. Mr. Elvert believes that IEPA could address the safety concerns by scheduling meetings to discuss safety and security with the stakeholders and the U.S. Coast Guard. 8/13/09P Tr. at 44.

Mr. Elvert testified that pleasure boaters must be monitored by tugboats and heavier traffic is an additional concern for the tugboats. 8/13/09P Tr. at 26. Mr. Elvert believes that additional safety measures are necessary to ensure that the risk is properly managed. *Id.* Mr. Elvert had no information concerning accidents other than the one discussed by Mr. Twait (*see infra* 36). 8/13/09P Tr. at 27.

### **Security**

ExxonMobil is a federally protected energy management facility that requires additional security measures and the refinery is a U.S. Coast Guard governed facility subject to increased security measures. Exh. 324 at 5. Mr. Elvert noted that these increased security measures include requiring extensive background checks for anyone within a specific designated area along the river's edge. *Id.* Mr. Elvert opines that the increased recreational use will pose a security threat to ExxonMobil and other facilities along the LDPR. *Id.* Mr. Elvert maintains that IEPA has not specifically addressed security concerns including failing to respond to the Three Rivers Manufacturing Association's concerns. Exh. 324 at 6. Furthermore, Mr. Elvert notes that no official meeting with government officials and stakeholders has taken place to discuss security issues. *Id.*

### **Richard Lanyon, The District**

Richard Lanyon began his career at the District in 1963, serving in various engineering, maintenance and operations departments following his bachelor and master of civil engineering degrees at the University of Illinois at Urbana-Champaign. 9/8/08A Tr. at 14. He worked as Director of Research and Development for seven years before he became General Superintendent, the position he held at the time of the hearing. *Id.* Mr. Lanyon provided a historical overview of the development of the CAWS, the current uses and prospective capital improvements. Exh. 60, 2, 9/8/08A Tr. at 13-14. He believed that IEPA has not clearly demonstrated that improving wastewater treatment is feasible, beneficial or economically reasonable, and that the rulemaking will be premature if it proceeds before all the District's studies have been completed. 9/8/08A Tr. at 10-11.

### **The History, Structure and Operation of the CAWS**

Mr. Lanyon explained that the CAWS is a system of altered natural rivers and artificial channels that allowed the city to reverse the flow of the Chicago and Calumet Rivers away from Lake Michigan in the early 1900s in order to prevent illness due to drinking water contamination. Exh. 60 at 2. The North Shore Channel and Wilmette Pumping station were built in 1910 to divert lake water into the North Branch of the Chicago River, to flush the river of wastes and eliminate odors. *Id.* The CAWS consists of 78 miles of canals, about 57 of which are man-

made; the other 21 have been altered to the extent that, according to Mr. Lanyon, they no longer resemble a natural river channel. Exh. 60 at 3. One artificial channel, the Calumet-Sag, contains the O'Brien Lock and Dam, which the U.S. Army Corps of Engineers built in 1960 to control the water diverted from Lake Michigan into the channel. Exh. 60 at 4. All flows are controlled by hydraulic structures operated by the District with oversight from the U.S. Army Corps of Engineers and the U.S. Coast Guard. Exh. 60 at 3.

Additionally, Mr. Lanyon explained that absent in most of the CAWS are the features of a natural river: "gradually sloping banks, varied sediment size, bends, aquatic vegetation, riffles, and a mix of shallows and deep pool areas". Exh. 60 at 5. Mr. Lanyon continued:

"The man-made waterways do not have a shallow area along the banks; the depth drops off very rapidly; sediments are soft and unstable, many banks are lined with high walls consisting of vertical sheet piling, concrete, wood or large limestone rocks; periodic draw downs of water levels cause unexpected, rapid increases in stream velocity; and there is frequent barge and large power boat traffic..." Exh. 60 at 5.

Mr. Lanyon explained that the various inflows into the CAWS include discretionary diversion from Lake Michigan, leakage through control walls, tributary streams, storm runoff, combined sewer overflows and treated effluent from water reclamation plants. Exh. 60 at 5. Treated effluent comprises over 70 % of the annual flow, and during dry winter months it makes up nearly 100% of the flow. *Id.* The District fluctuates the flow volume in the channels in order to provide for required navigation depth, high water quality (as shown by dissolved oxygen levels), urban drainage and flood prevention. Exh. 60 at 4, 9/8/08A Tr. at 50-51. Flows are not regulated based on temperature. 9/8/08A Tr. at 51. Mr. Lanyon explained that to maintain water quality primarily through warm weather months, the discretionary diversion of Lake Michigan water is allowed at a rate of about ten percent of the annual flow in the CAWS, or an average of 270 cubic feet per second (CFS). 9/8/08A Tr. at 49-51. The allotment must be used gradually over time because the design capacity of the CSSC can divert only limited CFS, because the force of gravity is limited and because too much flow may cause velocities that would violate Corps navigation rules. 9/8/08A Tr. at 52. The diversion is mainly accomplished by gravity, which pulls water through sluice gates at the O'Brien Lock and Dam and the Chicago River Controlling Works. 9/8/08A Tr. at 55. Pumping is an option at the Wilmette Pumping Station, but the pumps on site are too old to work efficiently, requiring the District to use portable pumping equipment or to rely on gravity. *Id.*

The District's discretionary allotment is scheduled to be reduced to 101 CFS in 2015 because following TARP and other water quality improvements in Illinois, a memorandum of understanding with other Great Lakes states prohibited Illinois from continuing to use its discretionary diversion for water quality maintenance. 9/8/08A Tr. at 53-54. Mr. Lanyon stated that the 2015 reduction will force the District to work harder to meet the dissolved oxygen indicators for high-quality water. *Id.*

## Uses of the CAWS

Mr. Lanyon stated that the CAWS allowed Chicago to become a commercial center by creating a navigable connection between the Great Lakes and the Illinois River, and that besides keeping drinking water safe, the most important uses of the CAWS are commercial navigation and urban drainage functions. 9/8/08A Tr. at 2-3, 9/8/08A Tr. at 19. For example, in 2006, about 17,000 barges locked through the Lockport Lock and Dam, over 9,000 locked through the O'Brien Lock and Dam, and about 8,792 traveled along the Calumet-Sag Channel. 9/8/08A Tr. at 28. This commercial traffic involves a high volume of off-loading throughout the CAWS. *Id.* Mr. Lanyon believed that the heavy barge traffic and industrial land use around the CAWS make activities like wading and small-craft boating unsafe. Exh. 60 at 7. He also believed that the substantial water quality improvements have brought about a general misconception that the CAWS have become equivalent to natural General Use water bodies with the potential to support unlimited recreational and aquatic life uses. Exh. 60 at 10. He stated that the CAWS was not designed to support either type of use, and that the physical configuration and properties of the system will prevent attainment of those uses. *Id.* He stated that for those uses to become realistic goals, substantial and widespread modifications would be necessary. *Id.*

Mr. Lanyon stated that he is aware that small boat craft use the Chicago River and that density currents of undisinfected effluent (something like backflows that occur deep underwater) sometimes creep upstream at numerous outfalls along the North and South Branches. 9/8/08A Tr. at 102-05. He also stated that the District leases and grants easements of land along the CAWS to park districts and local government to develop boat slips or launches and provide public access to the CAWS. 9/8/08A Tr. at 108-110, 160. These include the Clark Park and River Park launches on the North Branch, the Alsip and Worth launches on the Calumet-Sag and the Summit launch on the Sanitary and Ship Canal, among others. 9/8/08A Tr. at 109. Despite the District's concerns about the safety of the CAWS for recreational uses, Mr. Lanyon stated that the District has not built any barriers across the channels that would prevent small boat operators from traversing undisinfected effluent downstream of the outfalls, because such barriers would violate Corps navigational rules. 9/8/08A Tr. at 105.

Although the District does not require lessees to provide public access to the CAWS on the leased land, Mr. Lanyon acknowledged that the District's "waterway strategy" encourages public open space recreation and water edge accessibility in the District's properties. 9/8/08A Tr. at 130. However, he noted that the District has never evaluated the CAWS for recreational safety before leasing land to government units or park districts. 9/8/08A Tr. at 161. According to Mr. Lanyon, although the District's leases place primary responsibility for safety on lessees, several years ago the District followed IEPA insistence and posted signage advising CAWS users that the waters are not safe for bodily contact. 9/8/08A Tr. at 161-162. On the other hand, the District participates annually in three to four paddling events on the CAWS, such as the Flat Water Classic, to promote the use of boating on "water trails." 9/8/08A Tr. at 166, 168-69. The District participates by cleaning the reach of the river used for the event in pontoon boats the day before the event, and preventing non-event traffic the day of the event. 9/8/08A Tr. at 170.

### **Samuel Dennison, The District**

Dr. Dennison is a Biologist in the Environmental Monitoring and Research Division of the Research and Development Department of the District. He has worked with the District since 1971, following his Biology degree from Saint Mary's University, Master of Science in Fisheries Biology from Iowa State University and Doctor of Philosophy degree in Biology at the Illinois Institute of Technology. Exh. 65 at 1. His primary responsibility between 1974 and 2003 was monitoring fish populations in the CAWS, and since 2003, he has supervised a ten-person staff as Head of the Aquatic Ecology and Water Quality Section. *Id.* His monitoring duties involved collecting fish from 400-meter long sample locations throughout the CAWS using a 14-18-foot long flat-bottom boat. *Id.* Between 1974 and 2003, Dr. Dennison personally collected samples from the CAWS about 25 to 30 times per year, but after 2003 he did not collect samples very often. 9/8/08P Tr. at 105. He collected samples mainly during business hours throughout the work week. *Id.*

Dr. Dennison testified from personal experience about various physical characteristics of four channels that he believes render those channels unfit for Incidental Contact Recreation, as proposed by IEPA. 9/8/08P Tr. at 3. The channels he described are the CSSC between the South Branch and the Calumet-Sag Channel, the Calumet-Sag Channel, the Chicago River and Bubbly Creek. Dr. Dennison believed that these channels should be designated as Non-Contact Recreation, that is, that only "recreational activity in which human contact with the water is unlikely" should be allowed there. *Id.* (quoting Section 301.323 of IEPA's regulatory proposal).

### **General Dangers**

Apart from the safety concerns listed by Mr. Lanyon (including lack of shallows, steep or vertical banks, unpredictable flow changes and large boat traffic), Dr. Dennison cites barge mishandling, high wakes and sudden bank drop-offs as reasons that the CAWS can be "extraordinarily dangerous . . . throughout its entire length." Exh. 65 at 2. He and his sampling crew were nearly hit by a barge that broke loose from a tow along the Calumet-Sag Channel and silently floated toward his electrofishing boat, crashing into the channel wall just a few feet ahead of the boat. Exh. 65 at 3. Dr. Dennison stated that while operating the electrofishing boat, there were many times that he had to avoid the wakes of large pleasure craft and barges to prevent the boat from capsizing. *Id.* Finally, he believes that the banks of the waterways completely lack shallow or wadeable areas. *Id.* This deficiency prevented him from using minnow seines, which are cast while wading, to collect fish for sampling. *Id.*

Dr. Dennison also noted that from a safety standpoint draw downs can be "especially swift and dangerous and I don't believe that I could have controlled a hand powered boat and possibly not even a fishing boat with an outboard motor at that point in the Chicago Sanitary and Ship Canal at that time." 9/8/08P Tr. at 79-80.

Dr. Dennison noted specific dangers for each channel starting with the CSSC between the South Branch and the Calumet-Sag Channel. Exh. 65 at 4. Dr. Dennison stated that this channel has unsafe depths for wading and lacks shore egress due to vertical sheet-pile walls. *Id.*

Dr. Dennison stated that the Calumet-Sag Channel has unsafe depths for wading and lacks points of egress also, which could be a concern if a boat capsizes or an emergency situation arises. Exh. 65 at 5. He observed that industrial riparian land use is usual except for about a five mile reach upstream of the confluence with the CSSC where the Calumet-Sag Channel flows through a forest preserve. *Id.* Dr. Dennison stated that the channel is characterized by steep limestone walls, soft contaminated sediments and steep drop-offs along the banks. *Id.*

Regarding Bubbly Creek, Dr. Dennison described this channel as similar to the others in terms of steep or vertical banks and soft sediment, which in this case he stated is contaminated with organic pollutants and heavy metals. Exh. 65 at 5. He also stated that during and after wet weather events, the Racine Avenue Pumping Station discharges large volumes of combined sewage overflow into Bubbly Creek, which cause a sudden rise in water level and increase in flow velocity in this narrow channel. *Id.*

Dr. Dennison analogized the main branch of the Chicago River to the other reaches in terms of steep or vertical channel walls and lack of shallow areas and egress points for emergencies. Exh. 65 at 6. This channel also supports significant and growing traffic from large commercial tour boats and recreational power boats in addition to barges. *Id.* Dr. Dennison referred here to the main branch only, not the North Branch. 9/8/08P Tr. at 125.

Dr. Dennison acknowledged that in his work along the Calumet-Sag Channel, he has observed boat ramps and docks, canoers and kayakers, vegetative cover along about 25% of the Calumet-Sag Channel, and several types of birds, including herons and egrets. 9/8/08P Tr. at 96-97, 100-101. Dr. Dennison was aware of possible evidence of eagles. 9/8/08P Tr. at 102. He has observed sculling on the Chicago River east of Michigan Avenue as well. 9/8/08P Tr. at 136. He also stated that though he has experienced “close calls,” he has never actually capsized while in a boat in the CAWS. 9/8/08P Tr. at 99. Dr. Dennison stated that there are isolated areas where capsized boaters could exit the Calumet-Sag Channel, such as the South Bank upstream of Route 83, or the Little Calumet, where some homes have private docks or ramps to the water. 9/8/08P Tr. at 109.

Dr. Dennison is not aware of any activities or boat launches that the District sponsors or assists, other than those mentioned by Mr. Lanyon in his testimony. 9/8/08P Tr. at 93, 98. Similarly, Dr. Dennison observed that several side stream elevated pool (SEPA) stations along the Calumet-Sag have resting benches and gradual banks, though the SEPA stations also cause turbulence within the channel that may be hazardous to canoers and kayakers. 9/8/08P Tr. at 110-111. Dr. Dennison stated that an inexperienced small craft operator who capsized between these distant resting or egress points may be “in deep trouble.” 9/8/08P Tr. at 108. Dr. Dennison has not observed canoeing, kayaking or sculling along the CSSC, although he had “heard that there were sculling activities in the news.” 9/8/08P Tr. at 103, 113.

### **William Stuba, The District**

Mr. Stuba is the Assistant Chief Engineer in the Research and Development Department at the District. Exh. 62 at 1. Mr. Stuba began working with the District in 1977, following his

receipt of a Bachelor of Science in Civil Engineering at Bradley University and licensing by the State of Illinois as a professional engineer. *Id.* Prior to his current position, he worked as the Industrial Waste Enforcement Supervisor from 2000 to 2006 for the District.

Mr. Stuba supervises water quality monitoring on the CAWS by directing unionized boat crews that measure dissolved oxygen (DO) levels three days a week. Exh. 62 at 2. Two boats are dispatched from the Industrial Waste Division of the District each day to monitor DO. 9/8/08P Tr. at 58. The District's Continuous Dissolved Oxygen Monitoring Program on the CAWS began in 1998, however, the crews did not begin recording observations of specific activities on the waterways as part of their routine until June 24, 2003. Exh. 62 at 2. The logs of recreational activity as observed by the crews were recorded by year and channel, and in the interest of time, only years 2005, 2006 and 2007 were analyzed for this case. 9/8/08P Tr. at 36. They are contained in Attachments 1-3 of Exhibit 62. The Attachments show that crews observed recreational activities on 39, 48 and 37 % of the days in each year, respectively. 9/8/08P Tr. at 31. Mr. Stuba believed, based solely on the activities observed during those three years that no trend toward increasing recreational activity on the CAWS exists. Exh. 62 at 4.

Mr. Stuba stated that the crews observe and keep daily logs of activity, including floatable materials, bridge and bank activity, as well as recreational activity, during their scheduled DO runs on Tuesdays, Wednesdays and Thursdays. 9/8/08P Tr. at 34, 37-38. The crews also record observations during other routine tasks on the water on Mondays and Fridays. 9/8/08P Tr. at 34. The crews work eight-hour days on the water, usually from 7AM until 3 or 5PM. 9/8/08P Tr. at 34, 55. They do not normally work weekends or holidays, although they may on rare emergency occasions. 9/8/08P Tr. at 33, 40. The reaches of the CAWS that the crews regularly service are the CSSC upstream from the Stickney Water Reclamation Plant (Stickney Plant), the South Branch, South Fork, Chicago River, North Branch and North Shore Channel on Tuesdays; the CSSC downstream from the Stickney Plant until the Calumet-Sag Junction, upstream on the Calumet-Sag Channel and the Little Calumet River North to the rail bridge downstream of the O'Brien Lock and Dam on Wednesdays; and the CSSC downstream from the Stickney Plant to Lemont on Thursdays. Exh. 62 at 2.

Mr. Stuba stated that observing recreational activity is a task imposed on all crew but primarily patrol boat operators, and that this task is always ancillary to the crew's primary functions, which include servicing the dissolved oxygen monitoring equipment, maintaining the boat, ensuring the boat is operating in a normal and safe condition, cleaning equipment and performing navigational chores. 9/8/08P Tr. at 37-38, 61. The observations and recordings are not part of the crew members' job descriptions, and crew members are not evaluated on their observations as part of their job performance. 9/8/08P Tr. at 60. Crew observations have never been evaluated for quality assurance to assess whether the logs provide a complete record of activities on the waters traveled by the crews, either by sending an additional observation boat or by cross indexing observations with logs of uses at boat launches. 9/8/08P Tr. at 56. Mr. Stuba noted that there were 9 observations of recreational boating on July 16, 2008, but none on September 16, 2007 or on November 4, 2007. 9/8/08P Tr. at 44, 51.

### **Samuel Dorevitch, The District**

Dr. Dorevitch is an environmental health researcher at the University of Illinois Chicago School of Public Health. Exh. 100 at 1. He is a medical doctor with training and board certification in emergency medicine and preventive medicine with a specialization in occupational medicine. *Id.* Dr. Dorevitch has been an advocate for reducing pollution and improving the environment, particularly in the area of air pollution. *Id.* Dr. Dorevitch directed the epidemiological study entitled Chicago Health, Environmental Exposure, and Recreation Study (CHEERS) to examine potential health impacts from recreating in the CAWS. Exh. 100 at 4. Dr. Dorevitch testified that the CAWS group is made up of persons who “row, paddle, fish or go boating on the CAWS.” Exh. 100 at 5.

In 2007, a recreational use survey was undertaken while generally recruiting for CHEERS. Exh. 100 at 6-7. The data indicates that the dominant uses on the North Branch and North Shore Channel are rowing and paddling and on the Calumet-Sag is motor-boating. Exh. 100 at 7. No swimming or water skiing was observed and fishing from shore was uncommon. *Id.*

### **Thomas Granato, The District**

Dr. Granato is the Assistant Director of Research and Development, managing the Environmental Monitoring and Research Division of the District. 10/28/08 Tr. at 104-05. Dr. Granato’s testimony summarizes and completes the District’s testimony on recreational uses. 10/28/08 Tr. at 106. Dr. Granato testified that the District believes the IEPA relied on incorrect assumptions and incomplete information and reached faulty conclusions regarding the recreational use designations for the CAWS. *Id.* Dr. Granato stated that the IEPA should not have pursued this rulemaking, but instead waited for studies that are essential information to make scientifically supported decisions. *Id.* Dr. Granato further stated that if the rulemaking does proceed, the District “urges significant revisions to assure that the recreational use designations and criteria for the CAWS are technically and legally supportable.” *Id.*

Dr. Granato noted that to assist the IEPA, the District initiated a multi-phase research program and invested over \$10 million on expert studies that can produce meaningful recommendations. 10/28/08 Tr. at 107. A key focus in the comprehensive research is the risks to human health for the identified recreational uses relative to the current practice of not disinfecting the effluents. 10/28/08 Tr. at 108. Dr. Granato opined that instead of waiting for the conclusions of the assessment, the IEPA proposed recreational uses designations on the CAWS. *Id.*

Dr. Granato stated that if the rulemaking proceeds forward, the District has concerns that the incidental contact recreation use designation for the CAWS is not feasible. 10/28/08 Tr. at 109. The District has concerns about the safety, Dr. Granato notes that the man-made waterways do not have “substantial shallow areas along the banks, the depths drop off very rapidly, the banks are lined with high vertical sheet piling or large limestone rocks, periodic drawdowns of water levels cause unexpected, rapid increase in stream velocity and there is frequent barge and

large power boat traffic.” 10/28/08 Tr. at 109-10. Dr. Granato opines that the Non-contact recreational use designation is more appropriate for the CAWS given the physical limitations and hydrological modifications of the CAWS. 10/28/08 Tr. at 110. Specifically, the District recommends that the CSSC 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 the South Fork of the South Branch of the Chicago River be designated as non-contact recreation. 10/28/08 Tr. at 110-11.

### **June 16, 2008 Hearing**

On June 16, 2008, the Board held a public hearing before hearing officer Richard McGill to allow for testimony from citizens. Due to the number of testifiers, time was limited. The Board summarizes the testimony in the following paragraphs.

At the public hearing, the Board heard testimony from the following people: Barbara McKenzie, Chris Parson, Theresa Frisbie, Charlotte Lantz, Dr. David Solzman, Donna Hriljac, Griselda Simler, James Macdonald, John Brinch, Katie Coleman, Kelly Dougherty, Linda Braasch, Margaret Frisbie, Maryanne Preker, Michelle Kunze, Michelle Uting, Paul Nickerson, Randy Hetfield, Rik Lantz, Andrew Lantz, Ron Tevonian, Ryan Chew, Stephan Prassas, Sue Lannin, Tom Judge, Tom Nelson, Tom Bamonte, Susan Urbas, Tom Keaveny, William Walsh, Wally Van Buren, Pete Leki, Nancy McKenna, Cynthia Fox, Charles Portis, David Anderson, Ed Zotti, Gary Mechanic, Grant Crowley, Jessica Goehler, Patrick Slattery, Montana Butsch, Michael Fischer, and John Albrecht.

Barbara McKenzie testified in support of the proposed amendments. She believes the District should treat the water to disinfect the sewage treatment plant effluent and kill bacteria in the waters. 6/16/08 at 8. As a school teacher, she is concerned about children being exposed to the water when they are there to learn about or care for the river. 6/16/08 Tr. at 9.

Chris Parson expressed concern for people coming into contact with the waters. 6/16/08 Tr. at 10. He testified that he uses the waters for a variety of recreational uses. *Id.* As a leader of recreational activities, Mr. Parsons explains to others the danger of coming into contact with the water. *Id.* Despite his warnings, guests are still exposed to the water. *Id.* He believes that the current District standards are misleading. 6/16/08 Tr. at 11. The river currently meets or exceeds District standards. *Id.* He believes that this provides the public with a false sense of security that the water is safe. *Id.* There could be more improvement in the quality of water if District raised water standards to require the effluent to be treated. 6/16/08 at 12.

Theresa Frisbie testified that she was concerned about children and teenagers being exposed to the water. 6/16/08 Tr. at 12. Specifically, she is concerned about high school students on rowing teams who spend approximately twelve hours a week in the water from February until November. *Id.* She supports the increased standards believing that they would create a safer environment for the students. 6/16/08 Tr. at 13. Charlotte Lantz, a student rower, also testified in support of cleaning the river for future generations to use and for wildlife. 6/16/08 Tr. at 14.

Dr. David Solzman encouraged the District and the Board to improve water quality. 6/16/08 Tr. at 19. He mentioned that through his professional and recreational involvement with the waters he noticed that water quality has improved and more people are using the Chicago River. 6/16/08 Tr. at 16, 18. He is concerned that the effluent discharged into the Chicago River spreads to other cities, and as the water flows downstream into the Mississippi River cancer rates increase. 6/16/08 Tr. at 18. He believes that claims that treating the effluent would be expensive, complex, and energy consuming are unfounded. 6/16/08 Tr. at 17. He specifically mentioned a technology that University of Delaware Researchers have begun working with that cleans the water of bacteria and viruses and leaves no leftover like chlorine would. *Id.*

James MacDonald testified in support of the proposed amendments. 6/16/08 Tr. at 21. He wants the water quality to improve so that the communities that live near the river are able to use the river. 6/16/08 Tr. at 22.

John Brinch, a member of the development team for the Compass Rows Boats Club, testified that if there was more participation in cleaning the river, the overall cleanliness of the river would improve. 6/16/08 Tr. at 24-25.

Katie Coleman testified in support of the proposed standards. 6/16/08 Tr. at 26. She recollected an incident that happened to her while she was kayaking on the Chicago River and unintentionally fell in the water. *Id.* She accidentally swallowed some water and was sick enough to miss work the next day. 6/16/08 Tr. at 27. She believes that the river should be made safer so that if people have accidental contact while recreating they do not get sick. *Id.* Another witness Linda Braasch also fell into the water, but she did not ingest water or get sick. 6/16/08 Tr. at 34. Although she did not ingest the water or get sick, Ms. Braasch was afraid of illness during the time she rushed home to shower after falling in the water. 6/16/08 Tr. at 34. Ms. Braasch has also noticed that the reputation of the Chicago River is that the river is unsafe for recreation. 6/16/08 Tr. at 33. She has tried to get out of town guests to kayak with her in the Chicago River, but many of these guests have declined because of water quality. *Id.* Similarly, Michelle Uting expressed that she believed the water quality standards should be improved so that people did not have horror stories about falling in or being afraid of contact with the water. 6/16/08 Tr. at 41.

Kelly Dougherty testified that she does not use the Chicago River for direct contact recreation because she believes that the river is unsafe, and that she would use the river if the river was safer. 6/16/08 Tr. at 29. She does not believe that IEPA should have to find outbreaks of illnesses before IEPA takes preventive and protective measures. *Id.* She believes that in the long run improving the quality of the river would provide Chicago with more economic opportunities including tourism along the Chicago River. 6/16/08 at 29-30.

Margaret Frisbie, the executive director for Friends of the Chicago River, testified in support of the proposed rules. 6/16/08 Tr. at 37. She is concerned about people being exposed to illness when recreating on the river. 6/16/08 Tr. at 36. She is particularly concerned about people who swim in the waters because they are unaware of the risks. *Id.* She has observed people participating in an event called Gorilla Flotilla where participants build floats out of various objects and then jump in to see if their creations will float. 6/16/08 Tr. at 36-37. She has also observed children wading in the river. 6/16/08 Tr. at 37. When she tried to explain the

dangers to their parents, the parents did not speak English. 6/16/08 Tr. at 37. Maryanne Preker also supports making the river safer because she had observed similar incidents of people swimming and fishing in the Chicago River because a language barrier prevents them from understanding the risk. 6/16/08 Tr. at 38. Paul Nickerson testified that he has observed people taking fish from the River to eat. 6/16/08 Tr. at 42. When asked if they knew the River was polluted and was unsafe to eat fish from the river, these people told Mr. Nickerson that they did not know the risks of eating fish from the River. 6/16/08 Tr. at 42.

Additionally, Maryanne Preker encouraged District and the Board to improve water because they have a responsibility to make the water safer. In particular, she supports raising water quality standards because the at-risk teens that she works with enjoy cleaning the river. 6/16/08 Tr. at 38. This is these teens' only experience with nature in an urban setting, and studies have shown that violence decreases when teens are exposed to nature. *Id.*

Randy Hetfield, the President of the Chicago Whitewater Association, testified in support of improving water quality and about his experiences with whitewater rafting in the Chicago River. 6/16/08 Tr. at 46-47. Despite preventative measures that members of the Chicago Whitewater Association take to avoid getting sick from incidental contact with the water, members getting sick, usually with gastrointestinal illnesses, is not unusual. 6/16/08 Tr. at 47. Moreover the quality of the water prevents the majority of paddlers from going in the water. *Id.*

Rik Lantz testified in support of raising the water quality standards. 6/16/08 Tr. at 49. His support was based on health concerns and the wildlife that inhabit the waters. Like others that testified, he had an experience where he needed stitches after being exposed to the water and was concerned about having an open wound exposed to the river water. 6/16/08 at 50. He also enjoys seeing the wildlife that has come back to the area and encourages the Board to continue to support wildlife habitation. 6/16/08 Tr. at 51. Andrew Lantz also testified that he supported treating the water because he enjoyed viewing the wildlife. *Id.*

Ryan Chew, the lead partner of the Chicago River Canoe and Kayak, testified he has been able to recreate and have a canoeing and kayaking business on the Chicago River because of the current laws. 6/16/08 Tr. at 54. He believes that this proves that subsequent laws could further improve water quality. *Id.* With the current conditions, he is concerned about the health of his clients that recreate in the River and the economic impact to his employees if the River is unsafe. 6/16/08 Tr. at 57.

Additionally, Donna Hriljac, Stephen Prassas, Tom Judge, and Jessica Goehler testified in support of the proposed improvements to water quality standards because they enjoyed recreating in the Chicago Area Waterways. 6/16/08 Tr. at 59, 64, 108. Similarly, Susan Urbas, President of the Chicago River Rowing and Paddling Center, testified in support of improving water quality so that members of her organization and others could continue to recreate on the waters. 6/16/08 Tr. at 75-76.

Sue Lannin testified in support of improving water quality. 6/16/08 Tr. at 58. She would recreate more frequently on the Chicago River if the quality of the water was better. 6/16/08 Tr. at 60. Specifically she believes that if District cannot control pollutants from combined sewer

overflows during heavy rainfall, does not mean that they should let sewage treatment plants discharge effluent into the river on dry days. 6/16/08 Tr. at 60.

Tom Nelson supports improving water quality. 6/16/08 Tr. at 66. He believes that the best available technology should be used to treat the water so that the treatment kills the bacteria but does not “pass on its killing ability further downstream”. 6/16/08 at 67.

Tom Bamonte, president of the Chicago Area Sea Kayakers Association, testified that the proposed rules do not go far enough. 6/16/08 Tr. at 69. The proposed water quality standards could lead to making the Chicago River Standard swimmable, however, the IEPA has chosen not to make the waters swimmable in the foreseeable future. 6/16/08 Tr. at 70. He rejects IEPA’s claim that the river is not a fit place for paddling or other aquatic activities because the river is safer than Lake Michigan. *Id.* He also rejects IEPA’s argument that no public agencies “have invested in beaches or anything else involving primary contact.” 6/16/08 Tr. at 71. He believes that the public agencies have not invested in this because IEPA has not provided clear regulations that will lead to making the water suitable for primary contact. *Id.*

Tom Keaveny testified in support of improving water quality. 6/16/08 Tr. at 76. He believed that purifying water is an achievable goal based on past experiences with the Chicago Lakefront. 6/16/08 Tr. at 77.

Pete Leki, an ecology teacher at Waters Elementary School, testified that every year he and his students test the river water. 6/16/08 Tr. at 80. Water quality has never been higher than a C+, there has never been a negative test for *E-coli*, and that the results of these tests are disappointing to him and his students. 6/16/08 Tr. at 81-82. He hopes that the water standards will be improved. 6/16/08 Tr. at 83.

Cynthia Fox testified in support of improving water quality. 6/16/08 Tr. at 88. She has observed many people who enjoy recreating on the water. 6/16/08 Tr. at 86-87. She believes that the people of Chicago deserve better than the current standards. 6/16/08 Tr. at 88.

David Anderson encouraged the Board to consider what not implementing the standards would mean for future generations. 6/16/08 Tr. at 93.

Ed Zotti encouraged the Board to be proactive in implementing the standards and not wait until there were numerous illnesses from water related contact to do so. 6/16/08 Tr. at 94. He believes that despite the Board’s view about whether the water should be improved to allow primary contact that people were going to have incidental human contact with the waters. 6/16/08 Tr. at 94.

Nancy McKenna testified in support of the improved standards. 6/16/08 Tr. at 85. Charles Portis also testified in support of improving water quality based on his experiences running a company that does architectural historical kayak tours. 6/16/08 Tr. at 89.

Gary Mechanic, the president of the Illinois Paddle and Consul made three points in his testimony. 6/16/08 Tr. at 95. First, the standards were long overdue. 6/16/08 Tr. at 97. The

Clean Water Act called for a national goal of making waters safe for recreation and protection of aquatic life by July 1, 1983. 6/16/08 Tr. at 97. Second, the results of a health study being currently conducted by the University of Illinois School of Public Health should be irrelevant to the Board's decision. Third, the Board should be focused on protecting humans and aquatic life from pollution, not protecting taxpayers and polluters from financial burdens. 6/16/08 Tr. at 99-100.

Grant Crowley has operated, Crowley's Lot Yard, a boatyard for the past 30 years. 6/16/08 Tr. at 100. He has seen as the water quality improved more tour boat revenue on the river. 6/16/08 Tr. at 103. He believes that cleaner water supports recreational boating industries that generate jobs and income. 6/16/08 Tr. at 105.

Patrick Slattery is a professional consultant who recruits and hires professionals worldwide. 6/16/08 Tr. at 109-110. He has recognized that cities with a high quality of life are able to attract and retain talented individuals. 6/16/08 Tr. at 110. He encourages the Board to adopt the proposed recommendations, which he believes will pay off in "economic growth and vitality. 6/16/08 a Tr. t 111.

Montana Butsch, the executive director and founder of the Chicago Training Center, testified in support of improving water quality. 6/16/08 Tr. at 111. His organization works with inner city youth, and he is concerned about the safety of those youth who have incidental contact with the water. 6/16/08 Tr. at 112. Additionally, the Chicago River is the only place to engage in his rowing, which has benefited his life. *Id.*

Michael Fischer testified in support of improving water quality. 6/16/08 Tr. at 113. He believes that a general use standard should be for the entire area, including the Calumet region. 6/16/08 Tr. at 114. He fishes on the river, and knows that other conduct besides consuming fish caught in the river presents safety risks. *Id.* Fishers will sometimes bite their lines after tying a new hook or lure. 6/16/08 Tr. at 115. Despite being well aware of the risks, he still finds himself biting his line after the line has come into contact with water, which is why he does not fish on the Chicago River. *Id.* He also participated in a paddling event in 2004. He knew the risks of contact with river water and took every precaution to avoid contact. *Id.* He still was splashed and his glove held some water against his hand resulting in a blister and conjunctivitis. 6/16/08 Tr. at 116.

Wally Van Buren of the Illinois Association of Wastewater Agency offered a different view. 6/16/08 Tr. at 78. He believed that more research into the economic impact of proposed improvements should be done. 6/16/08 Tr. at 78. Because taxpayers will be the ones paying to implement the standards, there should be proof that the money spent will bring about the desired results. 6/16/08 Tr. at 78-79.

### **SUMMARY OF PUBLIC COMMENTS**

As of today the Board has received over 300 comments in the R08-9 docket. Not all those comments relate solely to recreational use and some comments received since the docket has been divided are included in more than one subdocket. The comments received on

recreational use range from lengthy post-hearing comments from the participants to notes and letters from citizens of the State. The overwhelming majority of the comments support the adoption of the IEPA's proposal. Due to the volume of comments received, the Board cannot individually summarize all of the comments, nor can the Board list all those by name who filed a comment. The Board's decision not to individually summarize or identify an individual does not mean that the Board has not reviewed the comments or did not consider the comments in reaching today's decision. The Board appreciates each and every comment and the time taken by the individuals to present their thoughts and opinions to the Board. All the comments received by the Board in this proceeding can be viewed on the Board's web sites at [www.ipcb.state.il.us](http://www.ipcb.state.il.us) through the Clerk's Office On Line link.

The Board lists below the organizations, businesses and public officials who filed public comments addressing the recreational use designations. The Board will not summarize the comments individually, but may include comments in the Board's discussion. Overwhelmingly the comments support the IEPA's proposal. The only public comment in opposition to the IEPA proposed standards was filed by Kindra Lake Towing, LLC. Kindra Lake Towing disagrees with USEPA that the waters should be designated to meet the CWA recreational goal. PC 303.

The following organizations, businesses or public officials have filed comments:

The Forest Preserve District of Will County PC2  
 Prairie Parklands Partnership PC5  
 The Illinois Paddling Council PC8  
 City of Chicago PC10  
 Chicago Area Sea Kayakers Association PC23  
 Jesse Jackson Jr., Congressman PC37  
 Elizabeth Coulson, State Representative PC38  
 Scott Waguespack, Alderman, Chicago PC43  
 Pat Quinn, then Lieutenant Governor PC51  
 Elizabeth Hernandez, State Representative PC58  
 Kevin Joyce, State Representative PC61  
 Fletcher Chicago Inc PC76  
 NeighborSpace PC 82  
 Forest Preserve District of Cook County PC187  
 Alliance for Great Lakes PC246  
 Chicago Park District PC249  
 Esther Golar State Representative PC299  
 Kindra Lake Towing LP PC303

The Board received final comments from the following participants, which will be included in the discussion of the issues below:

United States Environmental Protection Agency PC290  
 Southeast Environmental Task Force PC291  
 Citgo Petroleum Corporation and PDV Midwest PC292  
 ExxonMobil Oil Corporation PC293

Environmental Law & Policy Center, Natural Resources Defense Council, Openlands, Friends of the Chicago River, Prairie Rivers Network and the Illinois Chapter of Sierra Club (Environmental Groups) PC294  
 Metropolitan Water Reclamation District of Greater Chicago PC295  
 People of the State of Illinois PC296  
 Illinois Environmental Protection Agency PC298

### USEPA PC290

After reviewing the water quality standard revisions proposed by IEPA, as well as applicable provisions from the CWA and the Code of Federal Regulations, the USEPA opines that IEPA has failed to adequately demonstrate that recreation in and on the CAWS is not attainable. PC290 at 2. With a summary of CWA's goals to protect wildlife and enhance water quality and the requirement that water quality standard "provide for CWA section 101(a) uses *unless those uses have been shown to be unattainable,*" USEPA characterizes the applicable provisions and regulations as "creating a rebuttable presumption of attainability." PC290 at 1 (emphasis added). *See* 40 C.F.R. §§ 131.5(a)(4), 131.6(a), 131.10(j), and 131.20(a). USEPA notes that states can "rebut" this "presumption" only by showing that the CWA goal uses are not attainable for one or more of the six reasons or factors included in 40 C.F.R. § 131.10(g). USEPA states that IEPA's arguments are based on two of the six factors:

- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; [and]
- 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in attainment of the use. *Id.*

USEPA identifies four primary arguments that IEPA uses to support its proposed designated uses, which limit recreational use, and challenges each in turn. First, USEPA disagrees with IEPA's assertion that human sources of pollution cannot be remedied. IEPA points specifically to combined sewer overflows and undisinfected discharges from municipal wastewater treatment plants as human pollution sources that prevent recreational use. USEPA suggests to the contrary that storage, conveyance and treatment facilities could control this pollution, and could be constructed and operated without "caus[ing] more environmental damage" than the damage caused by allowing these pollution discharges to continue, and without causing "substantial and widespread social and economic impact." 40 C.F.R. § 131.10(g)(3), (6). PC290 at 3. USEPA notes that in appropriate circumstances, after implementation of a combined sewer overflows Long Term Control Plan, states may revise water quality standards if unforeseen and widespread social or economic costs would result from controlling residual combined sewer overflows discharges. *Id.*

USEPA also notes that human pollution, hydrologic modifications and the barge traffic resulting from the modifications are not present in all segments of the CAWS and the LDPR to the same extent or at all times. PC290 at 3. USEPA states that IEPA has failed to demonstrate

why some or all of these conditions cannot be controlled to allow for recreation in and on the water, for example, by placing complementary place, time and manner restrictions on commercial and recreational boat traffic. *Id.*

USEPA asserts that the UAA and several public comments document widespread recreational use on and even in the water in some segments, including boating, kayaking, fishing, wading, swimming, water skiing, tubing and jet skiing. PC290 at 3. USEPA notes that these uses exist despite the human caused conditions that IEPA cites as obstacles to attaining these uses. *Id.* This evidence of actual use suggests that the human caused conditions do not in fact prevent attainment in all segments, and that recreation is likely attainable if water quality is improved. *Id.* USEPA maintains that, contrary to IEPA's argument, a current lack of local government plans to promote recreation in the water has little relevance when assessing attainability of use designations under section 101(a)(2) of the Clean Water Act and 40 C.F.R. § 131.10(g). PC290 at 3.

For these reasons, USEPA recommends that Illinois include recreation in and on the water of all segments of the CAWS and LDPR in its proposed uses. PC290 at 3. USEPA suggests that the appropriate alternative to this would require IEPA to demonstrate on a segment-by-segment basis that these uses are not attainable based on one or more of the six UAA factors. PC290 at 3-4.

### **Southeast Environmental Task Force PC291**

SETF is a not-for-profit organization dedicated to serving the southeast side and south suburbs of Chicago by promoting public education about environmental resources and by promoting regional sustainable development. PC291 at 1. SETF has a long standing commitment to ensure the Calumets (Calumet River, Lake Calumet, the Little Calumet River, the Grand Calumet River and the Calumet-Sag Channel) are safe for existing and future recreational uses. *Id.*

SETF states that the evidence before the Board establishes that the Calumet waterways are widely used by members of the public for recreational fishing, paddling and boating and that those uses are increasing. PC291 at 1. SETF indicates that because of the existing uses of the Calumets with multiple public access points, the Calumets are properly proposed for recreational activities. PC291 at 2. SETF notes that there are at least 12 existing recreational facilities along the Calumets including marinas and public boat launches, with more being developed. PC291 at 2-3. The existing facilities lie along the Calumets from the mouth of the Calumet River to Harlem Avenue. PC291 at 2. New facilities are proposed at Blue Island and newer boat launches at Worth and Alsip on land leased to the municipalities by the District. PC291 at 3.

SETF points out that the Worth boat launch has been the point of entry for anglers participating in bass fishing tournaments. PC291 at 3. Fay's Point provides access for rowing clubs and on November 4, 2007, the Southland Regatta originated there. *Id.* Furthermore, the capacity of other launching facilities is evidence of the recreational use of the Calumets. PC291 at 4. SETF states that the launching and operation of recreational water craft is well-established and growing on the Calumets. *Id.*

SETF notes that in addition to the facilities that support boating, paddling and fishing, several public parks and residential areas are adjacent to the Calumets. PC291 at 4. For example two Cook County Forest Preserve properties allow access; Beaubien Woods provides boating and fishing access to the Little Calumet River, and Whistler Wood includes picnic facilities and is adjacent to the Calumet-Sag Channel. *Id.* Furthermore, approximately six miles of the Palos Preserve are immediately adjacent to the Calumet-Sag Channel. *Id.* SETF notes that these public lands are permanent points of access to the Calumets. PC291 at 5. SETF further notes that residential areas are also adjacent to the Calumets with direct points of public access to the waterways. *Id.*

SETF maintains that the open use of the entire length and surface area of the Calumets is mandated by Illinois law. PC291 at 5, citing Exh. 333. SETF asserts that IDNR designates public bodies of water in Illinois and the Calumet River, Lake Calumet, the entrance channel to the Calumet River, the Grand Calumet River and the Little Calumet River are designated as Public Bodies of Water. PC291 at 6, citing 17 Ill. Adm. Code 3704. The Calumet-Sag Channel is designated as a primarily artificial navigable water that was opened to public use. *Id.*

SETF argues that there is no evidence that the public uses of the Calumets are somehow incompatible with the commercial use. PC291 at 6. SETF notes that the testimony of Mr. Crivello characterized the recreational use of the Calumets and noted that he had never witnessed an accident between a commercial and recreational boat. PC291 at 6-7, citing Exh. 330. SETF points out that Mr. Crivello described boating practices and institutional controls that are in place to prevent accidents and he has never seen a backlog of commercial traffic at the O'Brien Locks. PC291 at 7.

SETF states that the recreational use of the Calumet is expanding and points to testimony from Ms. Barghusen for support. PC291 at 8, citing Exhs. 345, 352, 359 and 10/5/09P Tr. at 133-4, 222. SETF points out that Ms. Barghusen discussed the Northeastern Illinois Regional Trail Plan which includes the Calumets. *Id.* SETF also points to the testimony of Mr. Adelman who testified about the Calumet River Corridor Economic Development Vision and Strategy. *Id.*

Furthermore, SETF indicates that local units of government and public agencies are actively encouraging, promoting and facilitating recreational uses of the Calumets. PC291 at 9. SETF describes a plan by the City of Chicago that would include development along the Little Calumet to include expanded marinas and recreational areas. *Id.* SETF maintains that the Calumets are used for a wide range of recreational activities and that the Board must reclassify the Calumets consistently with their recreational uses. PC291 at 10.

### **Citgo Petroleum Corporation and PDV Midwest PC292**

Citgo/PDV agrees with IEPA's proposed non-recreational use designation proposed for the CSSC from the confluence with the Calumet-Sag Channel to the confluence with the Des Plaines River. PC292 at 1. Citgo/PDV notes that the federal regulations allow for the removal of a use that is not an existing use if one of the six UAA factors applies to the waterbody. PC292 at 2. Citgo/PDV maintains that the CSSC is a unique waterbody that is unsuitable for

recreational uses because of physical barriers such as vertical walls and steep embankments. *Id.* Citgo/PDV also believes the electric fish barrier, commercial shipping and discharge loading are impediments to recreational use. *Id.* Citgo/PDV states that the physical uniqueness can cause severe wave amplification that makes the CSSC unsuitable for canoes, sculling and other hand-powered boating. *Id.* The electric barriers also pose a danger to recreational activities and the barge traffic can be difficult for small boaters to avoid. For all these reasons, Citgo/PDV supports the proposed non-recreational use designation for this waterbody. PC292 at 3.

### **ExxonMobil Oil Corporation PC293**

In addition to the testimony by Mr. Elvert, ExxonMobil filed a comment reiterating concerns about safety and security along the LDPR. PC293 at 2. ExxonMobil believes that the proposed designated use of incidental contact will encourage increased recreation use of the stretch of the LDPR where ExxonMobil's refinery is located. *Id.* ExxonMobil notes that this area has constant barge and tugboat traffic, which poses a threat to recreational users. *Id.* ExxonMobil is also concerned that security at the refinery could be compromised due to increased recreational users. *Id.* ExxonMobil asks that IEPA and other governmental entities to meet with stakeholders on the LDPR to discuss security and safety. PC293 at 2-3.

### **Environmental Law & Policy Center, Natural Resources Defense Council, Openlands, Friends of the Chicago River, Prairie Rivers Network and the Illinois Chapter of Sierra Club PC294**

The Environmental Groups comment that the IEPA's proposed designations for "incidental contact" recreational use (e.g. kayaking, canoeing, fishing) for sections of the CAWS and LDPR are necessary both to comply with federal legal requirements and to support increasing recreational activity that is occurring on the waterways. PC294 at 1-2. The Environmental Groups explain the requirements of the Clean Water Act are to achieve "fishable and swimmable" water quality wherever attainable, and where not, to protect both existing and attainable recreational uses of the waters. PC294 at 3-4, citing 40 C.F.R. §131.2. A state may not downgrade existing uses of the waters. *Id.*, citing 40 C.F.R. §131.11. A use is considered attainable unless the State can prove through a UAA that the use is precluded by at least one of six UAA factors. The Environmental Groups note that the UAA factors include various manmade and natural conditions that prevent attainment, as well as "widespread economic and social impact" that would result from the water quality controls needed to attain a use. *Id.*, citing 40 C.F.R. §131.11(g). States must conduct a triennial review of water quality standards not meeting the "fishable and swimmable" standard and upgrade designations if necessary. PC294 at 2-3, citing 33 U.S.C. §1251(a)(2). The Environmental Groups state that, unless proof exists that incidental contact recreational uses do not already occur on the CAWS and are unattainable due to one of the six UAA factors, the Clean Water Act requires Illinois to upgrade water quality standards to protect these uses. PC294 at 5. The Environmental Groups further state that Section 5(c) of the Act designates the Board as the authority to do this. PC294 at 3, citing 415 ILCS 5/5(c)(2008).

Pursuant to these requirements, the IEPA conducted UAAs for the CAWS and LDPR to determine the most sensitive use attainable on the water. PC294 at 5. The UAAs found that,

while full-body immersion activities (e.g. swimming) were precluded by manmade conditions and hydrologic modifications on the waterways that could not be remedied, incidental contact recreational activities existed or were attainable without causing “widespread economic and social impact.” PC294 at 4-5. While the District has asserted that the waterways are not heavily used for incidental contact recreation and that such uses are unattainable due to boat traffic and the physical characteristics of the waterways, the Environmental Groups opine that the District’s evidence fails to disprove the IEPA’s findings to the contrary. PC294 at 6. The District admits that the effluent disinfection necessary to meet upgraded water quality standards would not cause “widespread economic and social impact” under the UAA factors, PC294 at 6-7, and accordingly the Environmental Groups conclude that the District’s budgetary constraints are irrelevant to this rulemaking, particularly in light of the economic investments communities and government entities have made in improvements to the waterways for recreational and other purposes, PC294 at 9-13.

The IEPA divided the CAWS and LDPR into seventeen segments, to each of which IEPA assigned one of three tiers of recreational use designations: incidental contact recreation, non-contact recreation, and non-recreation. PC294 at 13. The three designations are based on the degree of human contact with the water likely to occur through designated uses and are defined in more detail in the IEPA’s Statement of Reasons. *Id.* (citing SR at 38-9). The IEPA proposes applying the incidental contact recreation designation to twelve of the seventeen segments of the river, which are illustrated in a map provided by the Environmental Groups. *Id.*, citing Exh. 346.

The Environmental Groups divide the twelve segments into four areas based on the manner and degree of recreational use of those regions, which loosely correspond to effluent discharge locations of three of the District’s wastewater treatment plants. PC294 at 13. These areas are the North Chicago River System, the CSSC, the Calumet River System, and the LDPR. PC294 at 14. The comments first summarize the evidence in the record suggesting that incidental contact recreational uses exist or are attainable on the waterways generally, and then expound on this evidence in further detail for each of the four areas.

The Environmental Groups assert that, contrary to the District’s claims, the evidence on the record “overwhelmingly supports” the conclusion that recreational uses on the waterways are both existing and attainable. PC294 at 14. The comments point to studies conducted by the District and IEPA as evidence of canoeing, kayaking, sculling, jet skiing, wading, fishing, bird watching, and other recreational activities on the waterways. PC294 at 14-15. Among other sources, they also cite the testimony of experienced CAWS recreators and recreation-related newspaper and magazine articles as evidence that numerous individuals of various ages are active on the waterways. *Id.* Other studies described in the comments suggest that children, youth, the elderly, and other “sensitive” populations are among these recreators. PC294 at 16-17. Furthermore, the Environmental Groups state that experts have testified that the manmade and natural conditions of the CAWS and LDPR render them not merely suitable for recreational use, but in many respects preferable to other regional waters due to warmer water, a clearer view of boat traffic, and shelter from wind and waves. PC294 at 23-24. The Environmental Groups recount that these witnesses also refuted the District’s claims that the waterways lack sufficient ingress/egress points or that barge traffic is a danger to recreators. *Id.* Finally, the Environmental Groups indicate that the record shows that recreation on the waterways is not

only existing and attainable, but has demonstrably increased in recent years and is likely to continue to do so. PC294 at 17-20.

The Environmental Groups also discuss recreation on each of the four areas of the river individually. On the North Chicago River System, paddling, wading, fishing, skiing, the riverwalk, boat liveries and launches, regattas, and water trails all attract individuals to the waterways. PC294 at 24-27. Numerous reports exist of individuals fishing and paddling on the CSSC, as well, where evidence shows a number of safe ingress/egress points. PC294 at 28-29. Fishing, canoeing, sculling, wading, jet skiing, bird watching, and other activities occur on the Calumet River System, and the Environmental Groups describe extensive investment and development that has occurred in this area to increase access to recreation. PC294 at 30-33. The Environmental Groups specifically address the District's claims that stretches of the Calumet River System lack points of egress, describing many docks, boat launches, and breaks in seawalls in the area. The comments also state that both expert testimony and the IEPA's research found paddling occurring on the LDPR, and the IEPA's UAA study found that all local contacts believed incidental contact recreational uses would increase in the area if water quality improved. PC294 at 35, citing SR at 7-39. For each of these regions, the Environmental Groups concluded that the existing and attainable uses demonstrated by the evidence on record must be protected under the requirements of the Clean Water Act. PC294 at 27, 29-30, 33-34, 35.

The Environmental Groups conclude by stating that the evidence on record shows that incidental contact recreational activities both exist and are attainable on the CAWS and LDPR and are likely to increase in the future. PC294 at 36. The Environmental Groups reassert that none of the UAA factors prevent the attainment of recreational use on the waterways and therefore, pursuant to the Clean Water Act, incidental contact recreational uses must be protected. *Id.*

### **Metropolitan Water Reclamation District of Greater Chicago PC295**

In the District's final comments, the District distills concerns regarding the IEPA's proposed recreational use designations down to four main points. The District also offers an alternative to the IEPA's proposal, suggesting alternate recreational use designations for certain reaches of the CAWS. The District recommends the Board remand the IEPA's proposed rules to the IEPA for further consideration.

On the four main points, the District states the IEPA's current proposal is inappropriate because:

- 1) The IEPA incorrectly included "fishing" in the proposed definition for "Incidental Contact Recreation";
- 2) Prevalent safety issues and physical hazards in the CAWS are not compatible with the proposed definition for "Incidental Contact Recreation";
- 3) The IEPA's proposed recreational use designations do not account for wet weather events that trigger combined sewer overflows and other wet weather flows; and

- 4) The IEPA's proposed recreational use designations also do not account for preventative measures being considered for stopping migration of Asian carp. PC295 at 4.

The Board summarizes the District's concerns regarding the IEPA's proposed recreational use designations in the following sections.

### **Fishing Not an Incidental Contact Recreation**

The District states that the IEPA incorrectly included the activity of fishing in the definition of Incidental Contact Recreation. PC295 at 5. The District argues that "fishing involves much less water contact and exposure than other activities." PC295 at 5. The District points out that the activity of simply fishing occurs out of the water, unlike the other activities listed under Incidental Contact Recreation. Since fishing involves only contact with water by hand, the District states that there is almost no chance of direct water ingestion. PC295 at 5. The District notes that the IEPA has not provided a specific explanation for why fishing is included in the proposed definition. For the activities listed in the proposed definition for Incidental Contact Recreation, the District states that the IEPA seems to have simply grouped together recreational uses that do not take place in large motorized watercraft. PC295 at 5.

Since the act of simply fishing occurs on the banks of the CAWS and would not lead to direct water ingestion, the District suggests that fishing would be better included under the IEPA's proposed definition for "Non-contact Recreation". PC295 at 6. To further support this suggestion, the District recommends that the Board wait for the completion of the Chicago Health, Environmental Exposure, and Recreation Study (CHEERS) which "will provide information on the actual water exposure involved with fishing." PC295 at 6. As Dr. Granato testified, "This study will enable us to begin to quantify the actual exposure and to determine whether it was appropriate to lump those activities under the same use." 10/28/08 Tr. at 125. The District suggests that the Board wait to rule on the IEPA's proposed recreational use designations until the Board can examine relevant water exposure data related to fishing and other Incidental Contact Recreation activities that will be provided when the CHEERS is completed and filed with the Board at the end of August 2010. PC295 at 7, Exh. 100 at 4.

### **Safety Issues and Physical Hazards in the CAWS an Alternate Proposal**

The District states the IEPA's proposed designations for Incidental Contact Recreation are not compatible with the prevalent safety issues and physical hazards in the CAWS. The District argues that the IEPA did not give proper consideration to the safety issues and physical hazards in the CAWS and incorrectly designated the following waterways as Incidental Contact Recreation:

- 1) CSSC from the South Branch of the Chicago River to the junction with the Calumet-Sag Channel.
- 2) Calumet-Sag Channel.
- 3) Chicago River.

- 4) South Fork of the South Branch of the Chicago River (Bubbly Creek).
- 5) South Branch of the Chicago River.
- 6) North Branch of the Chicago River from Ashland Avenue to its confluence with the South Branch of the Chicago River at Wolf Point (the “Lower North Branch Chicago River”). PC295 at 7.

The District suggests these waterways should be designated as “Non-contact Recreation”. PC295 at 7. The IEPA’s proposed definition for Non-contact Recreation recognizes waters “where physical conditions or hydrologic modifications make direct human contact unlikely or dangerous.” SR at 26.

The District relies on Mr. Lanyon’s testimony for support regarding the safety issues. Mr. Lanyon testified, “The physical characteristics of the CAWS present safety issues that may render activities, such as, swimming, wading, and hand-powered boating hazardous to individuals.” PC295 at 8, referring to Exh. 60 at 5. Mr. Lanyon explained that absent in most of the CAWS are the features of a natural river: “gradually sloping banks, varied sediment size, bends, aquatic vegetation, riffles, and a mix of shallows and deep pool areas”. PC295 at 8, referring to Exh. 60 at 5. Mr. Lanyon continued,

The man-made waterways do not have a shallow area along the banks; the depth drops off very rapidly; sediments are soft and unstable, many banks are lined with high walls consisting of vertical sheet piling, concrete, wood or large limestone rocks; periodic draw downs of water levels cause unexpected, rapid increases in stream velocity; and there is frequent barge and large power boat traffic. . . .  
PC295 at 8, referring to Exh. 60 at 5.

The District states that periodic draw downs are necessary to drain storm runoff to prevent flooding of streets and basements in Cook County. PC295 at 9. With elevation changes as great as seven feet, water velocity can increase by 7 1/2 times during a drawdown event. PC295 at 9, referring to 10/28/08 Tr. at 134-135. Based on personal experience, Dr. Dennison characterized a drawdown as “especially swift and dangerous and I don’t believe that I could have controlled a hand powered boat and possibly not even a fishing boat with an outboard motor at that point in the Chicago Sanitary and Ship Canal at that time.” 9/8/08P Tr. at 79-80.

Contributing to the safety issues and physical hazards, the District states, are the industrial land use and commercial barge traffic in the CAWS. Mr. Lanyon testified that according to the U.S. Army Corp of Engineers,

approximately 17,000 barges locked through the Lockport Lock and Dam, and over 9,000 barges locked through O’Brien Lock and Dam in 2006...8,792 barges traveled along the Calumet-Sag Channel in 2006 . . . In addition to this barge traffic, there is a high volume of associated commercial offloading throughout the CAWS. Finally, industrial riparian land use is common along the CAWS, which is no surprise for a system designed for the conveyance of treated wastewater

effluent and stormwater and commercial navigation. PC295 at 10, citing to Exh. 60 at 7.

The District reasoned that frequent traffic of barges and large power boats in the CAWS makes activities included under “Incidental Contact Recreation”, such as wading and hand-powered boating, unsafe. Under the conditions present in the CAWS, waders and hand-powered boats face “perilous collisions” with barges and large boats which often take up much of the width of the waterway. PC295 at 10. The District points to the IEPA’s own recognition of this danger: “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.” PC295 at 10, citing to SR at 33.

The District also refers to Dr. Dennison’s first-hand observations of “close calls” over the years since he began working for the District on the CAWS in 1971. In one episode while working on the Calumet-Sag Channel, Dr. Dennison testified that he and his crew narrowly avoided a barge that had broken loose. Dr. Dennison recalled that he and his crew had no warning that the barge was headed straight for their electrofishing boat. If they hadn’t made a decision to head out into the Calumet-Sag Channel when they did, unknowingly avoiding the barge’s collision with the channel wall, Dr. Dennison testified, “I would not be giving this testimony today...”. PC 295 at 12, citing to Exh. 65 at 3. Dr. Dennison testified that these close calls “have reinforced the idea that CAWS can be extraordinarily dangerous for recreational activities throughout its entire length.” PC295 at 12, citing to Exh. 65 at 2.

The District identified specific safety issues and physical hazards within the reaches that the IEPA proposed for Incidental Contact Recreation which the District suggests should be designated as Non-contact Recreation. Those issues are:

- 1) The Chicago Sanitary and Ship Canal from the South Branch of the Chicago River to the junction with the Calumet-Sag Channel: unsafe depths for wading, lacking in points of egress due to vertical channel walls, commercial barge traffic;
- 2) The entire Calumet-Sag Channel: unsafe depths for wading, commercial barge traffic (8,792 barges during 2006), lacking in points of egress, industrial riparian land use (except for 5-mile reach upstream of the confluence with the CSSC), steep limestone channel walls, soft contaminated sediments, steep bank drop-offs;
- 3) The Chicago River: vertical channel walls, no shallow areas, large commercial boats, recreational power boats, lacking in points of egress;
- 4) The South Fork of the South Branch of the Chicago River (Bubbly Creek): silt sediment unsafe for wading, steep banks and vertical walls, combined sewer overflows causing unexpected rise in water levels and flow velocities, limited points of egress. PC295 at 12-13, citing to Exh. 65 at 4-6.

In particular, the District points out 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 . . . . The same reasoning that IEPA used to designate the Calumet River Non-Contact Recreational should be applied to the Chicago River.” PC295 at 13, quoting Exh. 65 at 4-6.

The District suggests that the IEPA would have been better guided in the decision-making process by following the precedent of other states and environmental protection agencies who consider safety factors in setting recreational use designations. The District references:

Alabama Department of Environmental Management - Mobile River UAA

Missouri Clean Water Commission – Mississippi River UAA

Pennsylvania Department of Environmental Resources – Presque Isle Bay and Outer Erie Harbor UAA

Pennsylvania Department of Environmental Resources – Lower Delaware River and Delaware Estuary UAA

Los Angeles Regional Water Quality Control Board - Engineered Flood Channels UAA in Ballona, California. 10/28/08 Tr. at 146-153.

In particular, the District refers to Dr. Granato’s testimony to highlight the consideration of safety issues by other states. Dr. Granato testified that the Alabama Department of Environmental Management cited unsafe conditions due to barge traffic, industrialization, and lack of shoreline access as the rationale for not designating the lower Mobile River for primary contact or other recreation involving incidental water contact. 10/28/08 Tr. at 148-151. For the Mississippi River UAA, the Missouri Clean Water Commission found that heavy barge traffic posed a hazard to whole body contact recreation in certain river segments. 10/28/08 Tr. at 146. In another example, Dr. Granato pointed to UAA decisions by the Pennsylvania Department of Environmental Resource to exclude water contact recreation, citing unsafe conditions presented by boat and commercial shipping traffic and combined sewer overflows. 10/28/08 Tr. at 154. Dr. Granato also spoke of the Los Angeles Regional Water Quality Control Board’s recommendation to suspend recreational beneficial uses during wet weather conditions because of dangerous flow velocities after rain events. Dr. Granato added that the supporting study in Los Angeles showed that the recreational uses “would not be attained through effluent limits or best management practices because of the physical characteristics of the water bodies rather than the water quality preclude the use.” 10/28/08 Tr. at 155-156.

### **No Accounting for Wet Weather Events**

The District states that the IEPA’s proposed recreational use designations do not account for wet weather events that trigger combined sewer overflows and other wet weather flows. The District points to the IEPA’s Statement of Reasons indicating that recreational use is incompatible with wet weather conditions:

it is clear that as a result of CSOs [combined sewer overflows] during wet weather, any level of recreational activity in the waterway is unhealthy during periods when raw sewage is present . . . . While there may be an argument that most of the current recreational activity may be reasonably attained during dry weather, conditions under wet weather are clearly incompatible with recreational activity and the recreational use is not being attained during those conditions at any reasonably acceptable risk level. PC295 at 15, quoting SR at 45

The District suggests that if the Board accepts the IEPA’s assessment of risks, the Board should include a “wet weather recreational use designation” designed to address events involving combined sewer overflows and other wet weather flows. PC295 at 16.

In support of a wet weather provision, the District offers the testimony of Adrienne Nemura who explained that combined sewer overflows impacts on bacteria levels vary “from location to location and storm to storm” and have been “calculated to last several days after wet weather discharges have ceased.” PC295 at 16, quoting Exh. 116 at 4. Ms. Nemura explained why having a wet weather exemption is critical:

If no regulatory target is provided to address wet weather conditions, the public will not know when the water is safe for recreation and when it is not, and decisions about appropriate levels of control for sources other than wastewater treatment facilities will be arbitrary. PC295 at 16, quoting Exh. 116 at 4.

The District points to several other states and water authorities that have made provisions to suspend recreational uses due to wet weather discharges:

Indiana,  
 City of Indianapolis UAA,  
 Massachusetts,  
 Massachusetts Water Resources Authority,  
 Maine,  
 Ohio River Valley Water Sanitation Commission,  
 Los Angeles Regional Water Quality Control Board - Engineered Flood Channels  
 UAA in Ballona, California, and  
 Santa Ana River UAA, California. PC295 at 17, Exh. E, citing to Exh. 116 Att. 3;  
 10/28/08 Tr. at 148-153.

Indiana, as Ms. Nemura explains, “allows for a temporary suspension of the recreational uses if combined sewer overflows discharges are in accordance with an approved long-term control plan and a UAA.” PC295 at 17, quoting Exh. 116 at 7-8. Indiana created a “CSO [combined sewer overflows] wet weather limited use designation” within the water quality standards to allow for temporary suspensions of the recreational use criteria for up to four days following a combined sewer overflows event, and received approval from USEPA. PC295, Exh. E at 1, citing to Exh. 116 Att. 3 at 1. The City of Indianapolis used the state’s provision for a “combined sewer overflows wet weather limited use designation” to incorporate a UAA into its long-term combined sewer overflows control plan. PC295, Exh. E at 3.

Massachusetts, Ms. Nemura continues, “allows for a partial use designation for recreational or aquatic life uses with a UAA or a variance.” PC295 at 17, quoting Exh. 116 at 7-8. Massachusetts created provisions for “partial designated use of combined sewer overflows or stormwater-impacted waters”. Criteria for the partial designated use can be based on technology treatment limitations of the combined sewer overflows or stormwater discharges. PC295, Exh. E at 2. The Massachusetts Water Resources Authority (Boston) reached an agreement with USEPA to use variances for certain waterways in order to implement its long-term combined sewer overflows control plan. PC295, Exh. E at 3.

Ms. Nemura states that Maine “allows for a combined sewer overflows subcategory where recreational and aquatic life uses may be temporarily suspended. Several UAAs have also been conducted that allow for suspension of recreational uses due to wet weather discharges . . . .” PC295 at 17, quoting Exh. 116 at 7-8. Maine’s Citizen Board may temporarily suspend or modify water quality standards in a “temporary combined sewer overflows subcategory” that is established through a variance approach after a community submits a long-term combined sewer overflows control plan, implementation schedule, and UAA. PC295, Exh. E at 2.

The Ohio River Valley Water Sanitation Commission has adopted a provision in its water quality standards for the Ohio River allowing alternative criteria for communities that have submitted a long-term combined sewer overflows control plan and UAA. PC295, Exh. E at 2-3.

In California, for the Santa Ana River, a “high flow suspension of recreational uses” was determined appropriate along with a revision of numeric criteria. PC295, Exh. E at 4. For Ballona Creek in California, the Los Angeles Regional Water Quality Control Board adopted a “high flow suspension of recreation uses” for the engineered flood channels that applies under rainfall conditions triggering “swift-water protocols (*i.e.*, rescue squads are on alert if someone should happen to enter the water).” PC295, Exh. E at 4.

The District suggests the Board remand the IEPA’s proposed use designations directing the IEPA to include a “wet weather recreational use designation”. The District recommends that such a wet weather recreational use designation be similar to Indiana, Maine, and Massachusetts to make provisions for a temporary suspension of recreational uses during wet weather events affected by combined sewer overflows and other wet weather flows. PC295 at 18.

Although supportive of creating a wet weather recreational use designation, the District stresses that the District does not agree with the IEPA’s assessment of risks during wet weather. Based on the information presented at the hearings, including documents (such as the Geosyntec “Risk Assessment Report” (Exh. 71)) and expert testimony of Dr. Granato, Dr. Petropoulou, Dr. Gerba, and Dr. Tolson, the District states, “. . .there is no significant risk of gastrointestinal illness associated with recreational use of the CAWS in either dry or wet weather conditions.” PC295 at 15.

### **No Accounting for Asian Carp Preventive Measures**

The District states that the IEPA's proposed recreational use designations also do not account for preventative measures being considered for stopping dispersal of Asian carp. The District refers to preventative measures spelled out in the February 2010 Draft "Asian Carp Control Strategy Framework" (Framework) which was assembled by the Asian Carp Regional Coordinating Committee (ACRCC). Participating agencies in the Framework include the USEPA, Illinois Department of Natural Resources, US Coast Guard, US Army Corps of Engineers, US Fish & Wildlife Service, US Geological Society, Great Lakes Fishery Commission, City of Chicago, the District, and White House Council on Environmental Quality. The Framework contemplates preventative measures, both short- and long-term, such as "kill zones," poisons, electric barriers, intentional lowering of water quality, reducing diversions, and closing navigations locks. PC295 at 18, Exh. F. The District cautions that such actions will directly affect the recreational uses in the CAWS. PC295 at 18.

In addition, the District notes that the outcome of pending litigation before the US Supreme Court might significantly alter the operations of the locks and dams, sluice gates, and pumping stations for the CAWS. PC295 at 19-20. In an affidavit to the Court, Mr. Lanyon stated that prohibitions on opening the sluice gates to take in water from Lake Michigan will result in stagnation in certain reaches of the Chicago River, Little Calumet River, and the North Shore Channel. PC295 at 20, Exh. G. Mr. Lanyon forewarned the results: stream velocities near zero, loss in recreational use, loss in dissolved oxygen water levels, fish avoidance, and increase in nuisance odors. *Id.* Mr. Lanyon added that a prohibition on opening the sluice gates to maintain proper water levels will also result in decreased water levels during dry weather that would limit the use of the waterways by boaters, canoeists and kayakers. The District states that such court-ordered actions will significantly change the recreational uses in the CAWS. PC295 at 18.

The District stresses that the IEPA has not considered any of these potential actions or their detriments even though the IEPA's proposed recreational use designations would be significantly impacted. The District reiterates that "Incidental Contact Recreation" is defined by the IEPA as activities "such as fishing; commercial boating; small craft recreational boating; and any limited contact associated with shoreline activity such as wading." The District points out that these activities are not compatible with the proposed preventive measures. The District states, "wading and small craft recreational boating in the CAWS cannot coexist with netting, piscicides, acoustic bubble, light, electric barriers, and changes in the operations of locks & dams, sluice gates and pumping stations." PC295 at 20-21. The District recommends the Board remand the IEPA's proposed rule for further consideration of the appropriate recreational use designations. PC295 at 21.

### **People of the State of Illinois PC296**

The People support the recreational use proposal of IEPA as the recreational use proposal accurately reflects the existing uses of the CAWS and LDPR. PC296 at 1. The People state that the existing uses must be maintained under the Clean Water Act. *Id.* The People note that the

Clean Water Act requires that wherever attainable the waters of the nation be fishable and swimmable and there is a rebuttable presumption that these goals are attainable in all waters. PC296 at 1-2. If there are indications that the fishable and swimmable goal cannot be met, a UAA must be undertaken. PC296 at 2.

The People state that a UAA is a “structured scientific assessment” of existing factors that may limit the attainable uses of the waterbody. PC296 at 2. The People indicate that all existing uses must be protected even if “observers might view the actual recreational use as improvident.” PC296 at 3. The People opine that the presumption of attainability of the national goals may be rebutted only if evidence demonstrates that the national goals are unattainable. *Id.*, citing Kansas National Resource Council, Inc. v. USEPA, 255 F. Supp. 2d 1208, 1213.

The People argue that the evidence in the docket support IEPA’s proposal as the areas designated for Incidental Contact Recreational use are already being used by the public for fishing, boating and other activities. PC296 at 3. The People opine that the proposed incidental contact recreational use designation is the minimum destination that is appropriate for the CAWS and LDPR. *Id.* The People point to the evidence in the UAA reports and supporting documentation establishing a comprehensive investigation as to the actual uses of the CAWS and LDPR. PC296 at 4. IEPA documented field sightings of fishing and recreational boating as well as scattered sightings of primary uses like swimming and tubing. *Id.* The People note that in addition to the sightings, IEPA has provided evidence of regular and systematic use of the waterways for events such as the Flatwater Classic and Dragon Boat Races on the Chicago River as well as use of the CSSC and the little Calumet River by rowing crews for practice. PC296 at 4-5, citing Attach B at 4-46, 4-70, 4-85.

The People indicate that citizens have also participated in this proceeding and provided evidence of regular use of the CAWS and LDPR for fishing, boating and other recreational activities. PC296 at 5. The People point to PC23 filed by the CASKA and eleven other paddling organizations that details their uses of the waterway. *Id.* The People note that several citizens also presented testimony chronicling their uses of the waterways and that the Board has received 288 public comments that support the proposed incidental contact recreational use designation. *Id.*

The People also direct attention to evidence that demonstrates that the District acknowledges and “celebrates” the use of the CAWS for the Flatwater Classic. PC296 at 6, citing Exh. 289 at 72. The People point to observations by the District’s boat crews for support of the proposed use designations. *Id.* The People note that between 2005 and 2007, a District boat crews observed canoeing, sculling, kayaking, fishing, and recreational boating. *Id.*

The People maintain that the participants in this rulemaking have presented overwhelming evidence that the current use of the CAWS and LDPR are incidental contact recreation. PC296 at 7. The People argue that these uses must be protected pursuant to 40 C.F.R. §§ 131.10(h) and (i). *Id.* The People state that protection of existing uses is a straightforward requirement and to suggest otherwise misconstrues the process set forth in the federal regulations. PC296 at 8. The People opine that residents of northeastern Illinois have

already voted, with their paddles and fishing rods, that the CAWS and LDPR are places where they can recreate. *Id.* The People ask the Board to protect that use. *Id.*

### **Illinois Environmental Protection Agency Comment PC298**

IEPA notes that the proposed recreational uses have been the subject of intense scrutiny during this proceeding and that review has served to confirm and solidify IEPA's initial conclusions on the proposed recreational use designations. PC298 at 2. IEPA reiterates that the States have primary responsibility to set water quality standards for intrastate waters and changes to those standards must be submitted to the USEPA for approval. PC298 at 3. "Water quality standards" as used in the CWA includes both the use designated and the numeric or narrative criteria necessary to protect that use. *Id.*, citing 40 C.F.R. § 131.2(d). IEPA states that the Board in this subdocket will determine the recreational uses for CAWS and LDPR and address the issue of how to protect those uses at a later date. *Id.*

### **General Comments**

IEPA comments that with the exception of three segments currently classified as General Use waters, none of the waters included in this proposal have ever been designated as capable of reaching the CWA goal of swimmable. PC298 at 5. IEPA maintains that the three segments currently classified as General Use waters have never been used for primary contact or swimming. *Id.* IEPA attempts in the final comments to justify the determination that the waters are incapable of achieving primary contact uses and how the proposed recreational uses designations are supported by the record. *Id.* IEPA states that if IEPA fails to justify the proposal that the waters fall short of the CWA recreational goal based on the UAA factors, "the Board is required under the CWA and accompanying regulations to adopt uses consistent with the CWA recreational goal." PC298 at 5-6.

IEPA opines that the Board's responsibility is twofold. PC298 at 6. First, the Board must adopt designated uses for the CAWS and LDPR that protect the existing recreational uses. Second, the Board must determine if additional and more intensive recreational uses are attainable in the waters and if so adopt those attainable uses. *Id.* IEPA believes that there is ample evidence in the record to support a conclusion that the proposed recreational uses are both existing and attainable. *Id.* IEPA further believes that while the number of recreational users may increase or decrease over the next few years, the nature of the recreational activity is limited by the physical conditions and hydrological modifications of these waters and more intensive uses cannot be attained. *Id.*

### **UAA Factors**

IEPA relied on two UAA factors to support the conclusion that the CWA recreational goal could not be attained in the CAWS and LDPR. PC298 at 6. Those two factors are:

- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

- 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use. PC298 at 7, citing 40 C.F.R. §131.10(g)(3) and (4).

IEPA states that for the areas proposed for Incidental Contact Recreation use, IEPA relied on the third factor. *Id.* However, for those segments designated as non-contact recreational use and non-recreational use, IEPA relied on both factors. *Id.*

IEPA refers to the UAA reports to support IEPA's reliance on factors three and four and notes that are some differences between the proposal and the UAA recommendations. PC298 at 7. IEPA indicated the changes were necessitated by the merging of the CAWS and LDPR UAAs into one regulatory proposal and the regulatory structure of Illinois. *Id.* IEPA reiterates that the attainable uses for the waterways are;

- 1) Non-Recreation Use, which IEPA defines to include only commercial boat operations and large recreational boat passage and no human contact activity.
- 2) Non-Contact Recreation Use, which IEPA defines to include these Non-Recreation Uses as well as powerboat passage.
- 3) Incidental Contact Recreation Use, which IEPA defines to include: Non-Recreation and Non-Contact Recreation Uses as well as fishing, small craft boating and any limited contact associated with shoreline activity such as wading uses. PC298 at 8, citing SR at 31.

IEPA notes that primary contact recreational activities were not found to be attainable in the proposed incidental contact waters. PC298 at 8, citing Exh. 1 at 11. IEPA designated Calumet River from Lake Michigan to Torrence Avenue for Non-Contact Recreational Use due to the regularity of recreational power boat navigation to and from Lake Michigan and the relatively high concentration of marinas along Calumet and Little Calumet Rivers. *Id.* The areas proposed as non-recreation do not support primary contact, incidental contact or non-contact recreation due to physical or flow conditions or other restrictions. *Id.* IEPA included the CSSC downstream of the junction with the Calumet-Sag Channel and the Brandon Pool in this category as these areas are dominated by shipping traffic and are composed of vertical-walled deep-draft channels. PC298 at 9, citing Exh. 1 at 13.

IEPA comments that the LDPR UAA recommended two new recreational uses for the LDPR. PC298 at 9. The first recommendation was for Upper Dresden Island Pool, in which primary contact recreation was not attainable, that recreational use should be infrequent or accidental because of the effluent dominated nature of the river and the risk associated with navigation traffic. *Id.* The second recommendation was for Brandon Pool which should be protected for recreation, but recognize that primary contact did not exist or was very rare. *Id.* The LDPR UAA recommended protecting the use of Brandon Pool for non-contact recreation; however, IEPA decided no protection was warranted as non-contact recreational uses do not

exist. *Id.* After review of the UAA, IEPA determined that Upper Dresden Island Pool should be designated for incidental contact use and Brandon Pool as non-recreational use. PC298 at 10.

IEPA notes that the CAWS UAA concluded that none of the waterbodies could achieve the CWA recreational use goals due to limitations described in the six UAA factors. PC298 at 10. The CAWS UAA recommended two recreational uses be assigned to the CAWS. The first would protect for hand-powered boating and wading and the second would apply to reaches where only commercial or power boating occurs. *Id.* IEPA notes that in the CAWS UAA the recreational uses are termed “Limited Contact Recreation” and “Recreational Navigation” and those terms have been changed to “Incidental Contact Recreation” and “Non-contact Recreation”. *Id.*

IEPA initially planned to propose the non-recreational use for the entire CSSC; however IEPA became aware of boat launches on the CSSC. PC298 at 10-11. The two access points at Western Avenue in Chicago and First Avenue in Summit have no restrictions on the types of boats that can launch. PC298 at 11. Therefore, IEPA proposed the designation of this portion of the CSSC as incidental contact recreational use. *Id.*

IEPA maintains that the CAWS UAA and the LDPR UAA support the conclusion that primary contact recreation cannot be attained in the CAWS and LDPR and that IEPA’s proposed uses “are synonymous” with existing uses. PC298 at 11. IEPA developed the definitions for three distinct uses because the CWA recreational use goal could not be achieved. *Id.* IEPA believes that these designations are an improvement over the existing “secondary contact” use designation and the tiered approach provides a foundation for future development of recreational criteria to protect the uses in the future. PC298 at 11-12.

### **General Use Segments**

Three segments of the CAWS are currently designated as General Use waters and those reaches are:

Chicago River,  
North Shore Channel from the MWRDGC North Side Water Reclamation Plant to  
Lake Michigan, and  
Calumet River from the O’Brien Lock and Dam to Lake Michigan. PC298 at 12.

IEPA opines that the Board must find that primary contact is not occurring in these segments and that one or more of the UAA factors support downgrading the recreational use designation. *Id.* IEPA recommends removing these segments from the General Use category and including them with other CAWS segments based on the CAWS UAA. PC298 at 13.

IEPA indicates that primary contact does not occur and is not attainable in North Shore Channel and Chicago River based on recreational survey and other investigations. PC298 at 13. IEPA also believes that primary contact recreation does not occur in the northern part of the Calumet River, based on recreational survey information. *Id.* IEPA notes that these segments

were historically those most influenced by the addition of water from Lake Michigan, but the segments are not distinct in recreational uses. *Id.*

### **Rulemaking Language Proposed**

As discussed above (*see infra* 29-34), IEPA proposed amendments to Sections 301.247, 301.282, 301.307, 301.323, 301.324, 303.220, 303.225, and 303.227, as well as Section 302.402 and 303.204. PC298 at 14. IEPA is proposing definitions for several terms as well as the recreational use designations for each segment of the CAWS and LDPR. PC298 at 14-15. IEPA suggests including Sections 302.402 and 303.204 in subdocket A as IEPA believes addressing the amended language in this subdocket is appropriate. PC298 at 17. IEPA comments that the proposed language clearly has a recreational use component and IEPA opines the provisions are necessary for a logical reading of the remainder of the proposal. PC298 at 17-18.

### **Evidence in the Record**

IEPA points out that the statement of reasons in this proceeding is 115 pages long and the proposal includes numerous attachments. PC298 at 19. The attachments relevant to the recreational use designation at issue in this subdocket are the UAA reports (attachments A and B) as well as attachments H, J, K, L, N, P and JJ. *Id.* Attachment H contains a map of the recreational use designations proposed by IEPA and several of the attachments describe restrictions that local units of government place on more intensive recreational use. *Id.* Attachment L is an inventory of public access points along the CAWS and illustrates where the most intense recreational uses are likely to be and assisted in identifying which segments should be designated incidental contact recreational use waters. PC298 at 19-20. Attachment K summarizes the recreational data collected to document the existing uses of the CAWS. PC298 at 20.

IEPA further points to the testimony of Mr. Sulski as evidence to support the proposed used designations. PC298 at 20-21. IEPA notes the Mr. Sulski's testimony included personal observations gathered over his lifetime concerning the CAWS both in his professional capacity and as a user of the CAWS. PC298 at 21.

IEPA recounts the testimony from the June 16, 2008 hearing, where 44 witnesses testified concerning the proposed used designations for CAWS and LDPR. PC298 at 21. IEPA notes that 43 witnesses supported recreational activities on the CAWS and LDPR. *Id.* IEPA notes that as of the Board's March 18, 2010 opinion dividing this docket the Board had received over 285 public comments and all the comments addressing recreational use have advocated protection of the existing uses. PC298 at 22. IEPA observes that in addition to 250 members of the public providing comments the Illinois Department of Natural Resource (PC182), the Forest Preserve District of Will County (PC4), the Forest Preserve District of Cook County (PC187) and the Chicago Park District (PC249) have detailed the importance of recreational uses of the CAWS and LDPR. PC298 at 22.

IEPA remarks that testimony was also provided by Ms. Frisbie, Mr. Bamonte, Mr. Crivello, Ms. Barghusen and Mr. Adelmann concerning the existing uses on the CAWS and LDPR. PC298 at 23. These witnesses testified in support of the IEPA's proposal. *Id.*

IEPA further remarks that three witnesses testified on behalf of the regulated community. PC298 at 23. Mr. Elvert, Mr. Stuba and Mr. Dennison. PC298 at 23-24. Mr. Elvert expressed concern about security and safety, while Mr. Stuba discussed the absence of primary contact recreational activities during the District's survey. PC298 at 24. Mr. Dennison focused on the District's desire to have some segments proposed as incidental contact classified as non-contact recreational. *Id.*

IEPA indicates that there were 381 exhibits filed at hearing, and IEPA believes 67 are relevant to this subdocket. PC298 at 24. The exhibits include photographs demonstrating the recreational uses existing on the CAWS and LDPR as well as documentation of past and future recreational events. IEPA asserts that the exhibits further support the IEPA's proposed use designations for the CAWS and LDPR. *Id.*

IEPA is cognizant of the concerns expressed by ExxonMobil and the District regarding safety and security. PC298 at 25. However, under the Clean Water Act, the Board is obligated to protect uses that are existing uses. *Id.* The IEPA opines that Illinois "law does not give the Board the authority to prohibit unsafe recreational activities if such activities are regularly occurring" in the CAWS and LDPR. *Id.*

### **Technical Feasibility and Economic Reasonableness**

IEPA recognizes that the Board is required to consider technical feasibility and economic reasonableness of a rulemaking before adoption of that proposed rule. PC298 at 25. IEPA does not believe that technical feasibility and economic reasonableness are at issue in this subdocket. *Id.* IEPA states that there is no economic or technological impact of establishing the proposed uses. *Id.* IEPA believes that there will be no economic impact and the rules are technologically feasible as there is no technology requirement. PC298 at 26.

### **Midwest Generation Reply**

As indicted above (*see infra* 2), the Board granted several motions for leave to file a reply to the IEPA's comment. Midwest Generation's reply involves the IEPA's request that the Board include the proposed amendments to Sections 302.402 and 303.204 in the first notice in this subdocket. MWGen. Reply at 1. Specifically, Midwest Generation points out that those sections as proposed include language addressing the subject matter of aquatic life use designations, which Midwest Generation opines are not ripe for decision. *Id.* Midwest Generation objects to the IEPA's premise that inclusion of these provisions is appropriate, arguing that the inclusion is neither appropriate nor necessary. MWGen. Reply. at 1-2. Midwest Generation argues that the inclusion of Sections 302.402 and 303.204 would adversely affect Midwest Generation's interests in the proposed aquatic life uses that are the subject of R08-9C. MWGen. Reply at 2

Midwest Generation argues that the proposed amendments to Sections 302.402 and 303.204 do more than address recreational use designations. MWGen. Reply at 2. The amendments also set forth criteria the Board will use to determine aquatic life use designations and propose to eliminate the existing aquatic life use designations. *Id.* Midwest Generation argues that the issue of aquatic life uses is not ripe in this subdocket and inclusion could improperly prejudice the proposed aquatic life uses in subdocket C. MWGen. Reply at 3.

Midwest Generation recognizes that the Board may ultimately amend Sections 302.402 and 303.204 consistent with the Board's decisions on recreational and aquatic life uses. MWGen. Reply at 3. However, Midwest Generation argues that the proposed language is not an accurate or complete statement of the matters to be considered by the Board in determining aquatic life uses. MWGen. Reply at 4. Midwest Generation believes the IEPA's request to include Section 302.402 and 303.204 is contrary to the Board's March 18, 2010 order and Midwest Generation objects to the inclusion of those provisions. *Id.*

#### **Citgo Petroleum Corporation and PDV Midwest, LLC Reply**

Citgo/PDV's reply argues that the IEPA's proposed inclusion of Sections 302.402 and 303.204 is inconsistent with the Board's March 18, 2010 order separating the docket into four subdockets. Citgo/PDV Reply at 2. Citgo/PDV notes that subdocket A relates to recreational use designations and not to aquatic life uses. *Id.* Citgo/PDV joins the arguments of Midwest Generation. *Id.*

#### **Stepan Company Reply**

Stepan agrees with Midwest Generation that portions of Sections 302.402 and 303.204 are beyond the scope of subdocket A and inclusion will prejudice considerations in subdocket C. Stepan Reply at 2. Stepan concurs with Midwest Generation. *Id.*

### **DISCUSSION**

The Board will first discuss the Clean Water Act Recreational Use Goal and the ability of the CAWS and LDPR to achieve that goal. Next the Board will discuss the District's concerns and then ExxonMobil's concerns. The Board will conclude by discussing the Board's decision on rulemaking provisions.

#### **Clean Water Act Recreational Use Goal Attainment**

As many participants have noted in this rulemaking, the goal of the Clean Water Act is to achieve recreation in and on the water ("swimmable" water), wherever attainable. 33 U.S.C. §1251(a)(2). Thus, the first step in determining the appropriate recreational use designations for the CAWS and LDPR is deciding if the CAWS and LDPR are capable of attaining the swimmable CWA recreational use goal. Participants and commentors in this rulemaking overwhelmingly support recreational use designations lower than the CWA goal of swimmable, with the exceptions of two comments from the USEPA (PC290) and CASKA (PC23). The Board notes that other than three segments of the CAWS, the CAWS and LDPR are currently not

regulated to attain the Clean Water Act recreational use goal. In the paragraphs that follow, the Board will discuss whether or not the CWA swimmable goal is achievable, and make findings on the existing recreational uses in the CAWS and LDPR.

The USEPA requires states to perform a Use Attainability Analysis by reviewing the six UAA factors (40 C.F.R § 131.10(g)) to determine if the swimmable goal is attainable for a waterbody. The IEPA performed two UAA studies, one for CAWS and one for LDPR. The CAWS UAA study included review and evaluation of five to ten years of environmental data to determine the physical, chemical and biological conditions of the waterway, identification and characterization of the major stressors on the system, assessment of options for reducing or eliminating system stressors, and development of recommended use designations. *See Attach B at 2-5, 2-6.* The LDPR UAA study involved the evaluation of all available data to determine existing conditions of the waterway, determine potential to achieve and maintain higher value uses, identify and characterize significant stressors, assess activities to eliminate or reduce system stressors, and develop recommended use designations and associated water quality standards. *Attach A at 1-4.* Based on the two UAA studies of the CAWS and the LDPR, the IEPA determined that the swimmable goal of the CWA was not attainable in the LDPR or the CAWS because human caused conditions or sources of pollution and hydrologic modifications rendered the CWA swimmable goal unattainable. *See generally Attach A and B.*

In PC290, USEPA disagrees with the IEPA and offers the opinion that IEPA has failed to demonstrate why human pollution, hydrologic modifications and barge traffic cannot be controlled to allow for recreation in and on the water. For example, USEPA opines that placing complementary place, time and manner restrictions on commercial and recreational boat traffic is one way to allow recreation in and on the same water body. However, the USEPA has offered no support for this opinion or explanation on potential economic impacts on businesses serviced by the barge traffic. The IEPA commissioned extensive studies and convened stakeholder workgroups that included industry, government and environmental groups to evaluate UAA's for the CAWS and LDPR. IEPA has provided substantial data to the Board as have the other participants in this rulemaking. The Board has carefully reviewed the evidence, including the UAA reports and the testimony in this proceeding. The Board respectfully disagrees with the USEPA's suggestion that the CAWS and LDPR should be classified for recreation in and on the water. The Board finds that the overwhelming evidence supports the findings enunciated by the CAWS UAA and LDPR UAA that the Clean Water Act recreational use (swimmable) goal is not attainable because:

- 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use. 40 C.F.R § 131.10(g)(3) and (4).

### **Proposed Recreational Use Designations for CAWS and LDPR**

Having found that the CAWS and LDPR cannot attain the Clean Water Act recreational use (swimmable) goal, the Board must now evaluate the proposed designated uses for the CAWS and LDPR based on the existing uses of the CAWS and LDPR, because an existing use cannot be removed according to federal regulations. 40 C.F.R §131.10(h) and (i). Based on the CAWS and LDPR UAA studies, the IEPA proposed three categories of recreational use designations for the CAWS and LDPR: Incidental Contact Recreation, Non-contact Recreation, and Non-recreational waters. The proposed designations for the various segments of CAWS and LDPR along with their existing designation under 35 Ill. Adm. Code 303.441 is summarized in Table 5, below.

**Table 5  
Proposed Recreational Use Designation for CAWS and LDPR**

<b>Waterway Reaches</b>	<b>Current Use Designation 35 IAC 303.441</b>	<b>Proposed Use Designation 35 IAC 303.220 - 303.227</b>
North Shore Channel from Wilmette Pumping Station to North Side Water Reclamation Plant	General Use	Incidental Contact Recreation
North Shore Channel from North Side Water Reclamation Plant to confluence with North Branch Chicago River	Secondary Contact	Incidental Contact Recreation
North Branch Chicago River from its confluence with NSC to confluence with the Chicago River & South Branch Chicago River	Secondary Contact	Incidental Contact Recreation
Chicago River	General Use	Incidental Contact Recreation
South Branch Chicago River and its South Fork	Secondary Contact	Incidental Contact Recreation
Chicago Sanitary & Shipping Canal from its confluence with South Branch Chicago River to Calumet-Sag Channel	Secondary Contact	Incidental Contact Recreation
Calumet-Sag channel	Secondary Contact	Incidental Contact Recreation
Little Calumet River from its confluence with Calumet River and Grand Calumet River to its confluence with Calumet-Sag Channel	Secondary Contact	Incidental Contact Recreation

**Table 5**  
**Proposed Recreational Use Designation for CAWS and LDPR (cont.)**

<b>Waterway Reaches</b>	<b>Current Use Designation 35 Ill. Adm. Code 303.441</b>	<b>Proposed Use Designation 35 Ill. Adm. Code 303.220 -303.227</b>
Grand Calumet River	Secondary Contact	Incidental Contact Recreation
Lake Calumet & Lake Calumet connecting Channel	Secondary Contact	Incidental Contact Recreation
Calumet River from Lake Michigan to Torrence Avenue	General Use	Non-Contact Recreation
Calumet River from Torrence Avenue to its confluence with Grand Calumet River and Little Calumet River	Secondary Contact	Incidental Contact Recreation
Chicago Sanitary and Ship Canal from its confluence with the Calumet-Sag Channel to its confluence with Des Plaines River	Secondary Contact	Non-Recreation
Lower Des Plaines River from its confluence with Chicano Sanitary and Ship Canal to the Brandon Road Lock and Dam	Secondary Contact	Non-Recreation
Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge	Secondary Contact	Incidental Contact Recreation

The CAWS UAA study divided the waterway into 14 segments (reaches) and examined physical, chemical, biological, and waterway use data to determine the existing uses of the CAWS. *See infra* 13. The CAWS UAA study used four separate methods to survey the uses on the CAWS which included: 1) requesting information from stakeholders, 2) sending postcards to marinas, 3) soliciting information about ongoing and future development from public entities, and 4) collecting waterway use data by traveling each reach by boat. The conclusion from this exhaustive research was that recreational activities were taking place on nearly every segment of the CAWS and those recreational activities ranged from power boating to fishing to wading.

The LDPR UAA study conducted phone surveys of several marinas, bait shops, government institutions and personnel located on or near the LDPR. *See infra* 26. The surveys established that the LDPR is being used for both commercial and recreational activities.

In addition to the data from the two UAA studies, the Board has heard extensive testimony regarding recreational uses of the CAWS and LDPR. The Board's record includes substantial evidence of boat launches throughout both systems. Some segments of the CAWS

and LDPR have recreational uses which allow for more contact with the water, such as canoeing and kayaking, while others have recreational uses that are merely pass-through boating. In two segments there was no evidence that recreation is occurring. As noted in Table 5 above, the IEPA proposed three types of recreational use activities to encompass the existing uses: Incidental Contact Recreation, Non-contact Recreation, and Non-recreation waters. The new designations replace the current General Use, and Secondary Contact recreational use designations of CAWS and LDPR. In the following sections, the Board will discuss the designation of the various segments of CAWS and LDPR for recreational uses.

### **Designation of the Existing General Use Segments of CAWS**

Under current Board regulations, three segments of the CAWS (upper Calumet River, upper North Shore Channel and Chicago River) are designated as General Use, and therefore, should be capable of meeting the swimmable goal. However, as discussed above, the CAWS UAA study found that the three General Use segments could not attain the CWA goal of swimmable and did not currently support that use. With Calumet River from Lake Michigan to Torrence Avenue, the IEPA found that physical or flow conditions make direct human contact unlikely or dangerous and proposed that the segment be re-designated as Non-contact Recreation. The Board notes that the channel banks consists of sheet-pile, concrete walls and rip-rap. Other than accommodating barge traffic, the General Use segment of the Calumet River provides access to Lake Michigan for recreational boaters. Attach. B at 3-11. Further, small non-motorized boat recreation is very limited due to hazardous conditions created by heavy barge traffic and limited access points. *Id.* Based on this evidence, the Board agrees with the IEPA's proposed designation of the Calumet River from Lake Michigan to Torrence Avenue as Non-Contact Recreation waters.

For the other two General Use segments (Upper North Shore Channel and the Chicago River), the CAWS UAA study found that large portions of the CAWS, including the Upper North Shore Channel and the Chicago River, consist of man-made canals that were constructed to convey stormwater and wastewater, and provide for navigation. The man-made canals have steep sides, are deep draft, and have very little shallow shoreline. The CAWS UAA study found that due to these limitations along with the access limitations placed upon most of the waterways by the District and other riparian land owners, the physical hazards in the waterways and the high use of commercial navigation traffic, the attainment of primary contact recreation is not feasible at this time. *See infra* 22. The CAWS UAA study also found that the waterways cannot be restored to their original conditions as a result hydrologic modifications and sources of pollution that affect the attainment of the CWA recreational use goal. *See infra* 22. The CAWS UAA study found that primary contact recreation does not occur in the North Shore Channel and Chicago River. Attach. B at 4-23, 4-24, and 4-43 thru 46.

However, the CAWS UAA study found that limited contact recreational activities take place in both segments. Therefore, the Board agrees with IEPA proposal to redesignate Upper North Shore Channel and Chicago River as Incidental Contact Recreation waters, which includes recreational activities in which human contact with water is incidental with the probability of ingesting appreciable quantity of water is minimal. This designation is very similar to the existing definition of Secondary Contact at Section 301.380.

### **Designation of the Existing Secondary Contact Segments of CAWS and LDPR**

The IEPA proposes to designate the existing Secondary Contact segments of CAWS and LDPR as Incidental Contact Recreation with the exception of two segments, which are designated as Non-recreation. The two segments designated as Non-recreation are the CSSC from its confluence with the Calumet- Sag Channel to the confluence with Des Plaines River and LDPR from its confluence with CSSC to the Brandon Road Lock and Dam. The evidence presented in this rulemaking is overwhelming that recreation defined as incidental contact recreation is occurring in the reaches of the CAWS and LDPR that IEPA has proposed for the incidental contact recreation designation. However, full body contact recreation, such as swimming, is not attainable at this time due to human caused conditions (see UAA factor three (40 C.F.R § 131.10(g)(3))). Therefore, the Board finds that the record supports the IEPA's proposed Incidental Contact Recreation designation of the various segments of CAWS and LDPR.

Regarding the two segments designated as Non-recreation waters, the IEPA concludes that the CSSC segment from Calumet-Sag Channel to Des Plaines River and the LDPR segment from its confluence with CSSC to Brandon Road Lock and Dam cannot attain secondary contact recreational uses and need not be protected for such uses. The Board notes that these waters are dominated by shipping traffic, composed of vertical-walled, deep-draft channels, and lined with private industrial facilities that do not allow public access to the waterways. Exh. 1 at 13. In light of this, the Board finds that the proposed Non-recreation use designation for the CSSC and LDPR segments to be appropriate.

### **Summary**

The Board finds that the evidence in this rulemaking supports the IEPA's finding that there are recreational uses occurring in the CAWS and LDPR which must be protected. The Board further finds that the IEPA's proposed use designations are necessary to protect existing uses. Having found that the IEPA's proposal protects existing uses on the CAWS and LDPR, the Board will now review concerns raised by the District and ExxonMobil regarding the issue of whether or not the existing uses proposed by the IEPA should be protected.

### **The District's Comments on Recreational Use Designation of CAWS**

The District raises four issues regarding the recreational use designations for the CAWS proposed by IEPA. First, the District challenges the IEPA position that fishing is an incidental contact recreational use. Second, the District believes that safety and physical hazards in the CAWS make incidental contact recreational use unattainable. Third, the District argues that the IEPA did not account for wet weather events when designating recreational uses. And, fourth, the District asserts that the IEPA did not account for Asian Carp preventative measures when drafting this rulemaking proposal.

### **Whether Fishing is an Incidental Contact Recreational Activity**

The District disagrees with the IEPA's characterization of fishing as an activity consistent with "Incidental Contact Recreation" and points out that the IEPA has not provided a specific justification or explanation for why fishing is included in the proposed definition. The District argues that the activity of simply fishing occurs out of the water, unlike other activities listed in the definition. Since fishing involves little contact with water and almost no chance of direct ingestion, the District asserts that fishing should be included in the definition of Non-contact Recreation as opposed to Incidental Contact Recreation. PC. 295 at 6.

While the IEPA has not provided specific testimony or evidence regarding water ingestion by fishing to support the inclusion of fishing under Incidental Contact Recreation, the inclusion of fishing appears to be based on the existing definition of Secondary Contact at 35 Ill. Adm. Code 301.380 that includes fishing as an incidental contact activity. Further, neither the IEPA nor any of the other participants have responded to District's characterization of fishing as a non-contact recreational activity.

A review of the record pertaining to water exposure from fishing indicates that the quantification of water ingestion by fishing is addressed to some extent in the Geosyntec report submitted into the record by the District. *See* Exh. 71. Geosyntec used the following list of recreational activities identified in the Chicago UAA to evaluate the risk of exposure from recreational activities: Swimming, diving or jumping; Wading; Fishing; Skiing or tubing; Canoeing, sculling or paddling boating activity; Power boating; Attach B at 4-7 and Exh. 71 at 97. From this list, Geosyntec divided activities into high (canoeing), medium (fishing), and low (pleasure boating) exposure activities. Exh. 71 at 97. The Geosyntec report notes that immersion activities like swimming, skiing, and wading were not included in the risk assessment since they are not designated use activities allowed in the CAWS. Exh. 71 at 97. Geosyntec further defined the exposure activities for the purpose of deriving risk statistics for the receptor user. With canoeing the exposure activities included frequent contact with wet items, close proximity to water surface and occasional direct contact with water. Exh. 71 at 97-98. With fishing the exposure activities included occasional contact with wet items and infrequent direct contact with water. *Id.* For pleasure boating, the exposure activities included infrequent contact with wet items and no direct water contact. *Id.*

The Geosyntec report describes, "Incidental ingestion may occur through secondary contact of surface water contaminated surfaces, hand-to-mouth activity, or direct ingestion if accidentally submerged. Ingestion rates for these pathways are expected to vary widely dependent on the recreational activity and chance occurrence of high exposure events." Exh. 71 at 99. For purposes of the risk assessment, Geosyntec explains that incidental ingestion rates and exposure duration were developed using exposure parameters based on literature reviews, site-specific information, and professional judgment. Exh. 71 at 100-101. For the incidental ingestion rates for fishing, Geosyntec relies on a 95th percentile rate of 5.89 mL/hr, and 100th percentile rate of 22.13 mL/hr. Exh. 71 at Table 5-4. In comparison, for pleasure boating, Geosyntec relies on a 95th percentile of 2.95 mL/hr and a 100th percentile of 7.43 mL/hr, while for canoeing, Geosyntec uses a 95th percentile of 17.84 mL/hr and a 100th percentile of 34.00

mL/hr. Exh. 77 at Table 5-4. As for the exposure duration for fishing, Geosyntec assumed the likeliest time on the water would be approximately 3 to 4 hours, with a maximum time less than 6 hours. In comparison, for pleasure boating, Geosyntec also estimated the likeliest time on the water would be 3 to 4 hours, while canoeing would be 2 hours, with a maximum close to 5 hours. Exh. 77 at 101-102.

Based on the information in the Geosyntec report, the exposure leading to water ingestion for fishing lies between canoeing and pleasure boating. The Board notes that the Geosyntec report characterizes exposure from pleasure boating as coming from “infrequent contact with wet items”. Exh. 77 at 100. The Board finds such exposure from “infrequent contact with wet items” more closely fits the provision for “incidental contact” than “unlikely contact” which the IEPA reserved for “pass through” navigation under Non-Contact Recreation. Since the Geosyntec report indicated that exposure from fishing is greater than pleasure boating, and pleasure boating (*i.e.* non-pass through commercial boating) is included in the definition of Incidental Contact Recreation, the Board finds that it is appropriate to include fishing under incidental contact recreational activities. Therefore, at this time, the Board will maintain fishing among the activities under Incidental Contact Recreation, as proposed by the IEPA.

The Board recognizes that the District expects the CHEERS final report to provide a better quantification of the exposure involved in fishing and welcomes any new information during the First Notice comment period that might better clarify the exposure of fishing relative to other recreational activities.

**Safety Issues and Physical Hazards in the CAWS / Alternate Proposal**

The District suggests that the reaches listed in Table 6 below should be designated as “Non-contact Recreation” instead of “Incidental Contact Recreational,” as proposed by the IEPA. Table 6 displays the observed activities for each of the six CAWS reaches as determined by the CAWS UAA.

**Table 6  
Observed Activities for Six CAWS Reaches as Determined by CAWS UAA and IEPA**

<b>Waterway Reach</b>	<b>Observed Activities</b>
CSSC from the South Branch of the Chicago River to the junction with the Calumet-Sag Channel	CSSC: Commercial barge and recreational power boats, bank fishing, jet skiing, canoeing, hand-powered boating  CSSC near Western Avenue in Chicago and First Avenue in Summit: boat launches

**Table 6**  
**Observed Activities for Six CAWS Reaches as Determined by CAWS UAA and IEPA**  
**(cont.)**

<b>Waterway Reach</b>	<b>Observed Activities</b>
Entire Calumet-Sag Channel	Commercial barge and recreational power boats; fishing, jet skiing, water skiing, tubing, wading, canoeing, swimming, diving
Chicago River	Recreational boating, canoeing, kayaking, sculling, fishing, commercial navigation
South Fork of the South Branch of the Chicago River (Bubbly Creek)	Commercial and barge traffic, recreational activities at the confluence of SBCR, bank fishing, power boating, small boat launches, proposed canoeing and rowing
South Branch of the Chicago River	Fishing, boating, power boating, and canoeing, skiing
North Branch of the Chicago River from Ashland Avenue to its confluence with the South Branch of the Chicago River at Wolf Point (the “Lower North Branch Chicago River”).	North Branch Chicago River: Fishing, canoeing, paddling, boating, power boating, skiing, tubing, wading, small craft commercial navigation

PC295 at 7; PC298 at 10-11, Attach B at 1-11, 3-2 to 3-10, 4-44 to 4-48, 4-69 to 4-70, 4-85 to 4-86.

Other than swimming, skiing, diving, and tubing, the Board finds the activities observed on these water bodies appear to be consistent with “Incidental Contact Recreation”. The Board notes that although the IEPA initially planned to propose the entire CSSC as “Non-Recreational”, the IEPA became aware of boat launches on the CSSC near Western Avenue in Chicago and near First Avenue in Summit with no restrictions of types of boats that may be launched. The IEPA then split the CSSC so that a portion was proposed as “Incidental Contact Recreation”. PC298 at 10-11.

Although the District argues that these waters should be designated as “Non-contact Recreation” primarily because of safety issues and physical hazards, the IEPA and others have provided evidence of existing uses fitting the proposed definition of “Incidental Contact Recreation”. The Board notes that 40 CFR 131.10(h) and (i) prohibit states from removing or downgrading uses that are existing uses (as of November 28, 1975), that are currently being attained or that could be attained by implementing the CWA effluent limits. Therefore, the Board finds the District’s arguments unpersuasive and will not amend the IEPA’s proposal as suggested by the District.

### **No Accounting for Wet Weather Events**

The District suggests that the Board include a “wet weather recreational use designation” to address events involving CSOs and other wet weather flows. PC295 at 16. Currently, the IEPA’s proposed use designations do not provide for any sort of exemption, temporary designation, or subcategory that would address wet weather events and the impact of such events on use attainability.

The District points out that even the IEPA stated that “conditions under wet weather are clearly incompatible with recreational activity and the recreational use is not being attained during those conditions at any reasonably acceptable risk level.” *Id.* at 16 citing SR at 45. The District does not agree with the IEPA’s assessment of risk from wet weather flows in proposing the recreational use designations without accounting for wet weather flows. The District stresses the need for a provision in the use designations to address wet weather flows.

When the Board severed this rulemaking into four dockets, the Board created Docket (A) for establishing recreational use designations and Docket (B) for establishing criteria to meet the recreational use designations. In Docket A, the Board intends to address the issue of recreational use designation. To determine the recreational uses attainable, the Board looks at the existing recreational uses of the various reaches of the CAWS and LDPR and designates those reaches appropriately for the protection of the existing uses. As explained above, 40 CFR 131.10(h) and (i) prohibit States from removing or downgrading uses that are existing uses (as of November 28, 1975), that are currently being attained or that could be attained by implementing the CWA effluent limits. If a segment of the CAWS or LDPR is being used for recreational uses that involve incidental contact, the Board will designate that segment as Incidental Contact Recreation to protect the existing use. In Subdocket B, the Board will consider the issues concerning water quality or effluent quality standards or criteria needed to attain the designated use, including impact of CSOs. The Board encourages participants to comment further on this issue in Subdocket B.

### **No Accounting for Asian Carp Preventive Measures**

The District states “IEPA’s proposed recreational designated uses also fail to take into account the potential preventative measures that are being considered for stopping the migration of Asian carp, such as implementing and using ‘kill zones’, poisons, electric barriers, intentional lowering of water quality, reducing diversions, and closing navigational locks.” PC295 at 18. The Board agrees with the District that the IEPA’s proposal does not take into account recent information about the current preventative measures being considered and implemented by other state, federal, and Canadian agencies for dealing with Asian carp in the CAWS. The Board notes that the CAWS UAA, which forms the foundation of the IEPA’s proposal, is dated August 2007, predating the current litigation and draft Framework. The IEPA has not updated its proposal to address the Asian carp issue since litigation began or the draft Framework was published, except to file a response in opposition to motions by Citgo/PDV, and Stepan to hold an additional hearing on Asian Carp.

The Board recognizes that the Asian Carp preventative measures may have a significant impact on the CAWS and LDPR; however, the Board at this time does not believe that the Asian Carp issue impacts a decision on recreational uses. The Board must protect existing uses of the CAWS and LDPR and those current exiting uses are reflected by the IEPA's proposal. Therefore, the Board will continue to monitor the Asian Carp issue and will hold hearings on the issue as the issue relates to aquatic life uses, but the Board finds that the Asian Carp preventive measures do not at this time change the existing uses.

### **ExxonMobil Comments on Recreational Use Designation of LDPR**

ExxonMobil also expresses concern about the designation of the LDPR as incidental contact for the Brandon Road Lock and Dam to the I-55 Bridge. *See infra* 62. ExxonMobil is concerned that barge traffic and security issues for ExxonMobil's facility create an atmosphere where recreational activities should not be encouraged. Specifically, Mr. Elvert expressed concerns that boats could be swamped and that increased recreational activity will present a security risk to ExxonMobil's facility.

By contrast, IEPA testified that there was sufficient room on the LDPR for pleasure and commercial craft. IEPA also indicated that they had discussed the proposed use designations of the CAWS with the US Coast Guard; however, not the LDPR use designations. There is testimony of existing recreational uses on the LDPR.

The Board appreciates the concerns expressed by ExxonMobil, but finds that the record currently supports proceeding with a designated use of incidental contact for the LDPR from Brandon Road Lock and Dam to the I-55 Bridge. However, the Board invites additional comment and in particular invites the US Coast Guard to provide insights on this issue.

### **Sections 302.402 and 303.204**

The Board is convinced that proceeding with the amendments proposed for Section 302.402, the purpose section, is not warranted or necessary at this time. However, the Board will proceed with Section 303.204. The Board will amend Section 303.204 to reflect that this subdocket deals only with recreational use designations. The Board invites comment on these changes.

### **Section 303.441**

Although not included in the IEPA's original proposal, the Board is including Section 303.441 in the proposal for first notice. Upon reviewing the rules, the Board believes that Section 303.441, titled "Secondary Contact Waters" is no longer necessary. Section 303.441 lists waters designated as Secondary Contact Waters and as this rulemaking will eliminate that use designation, Section 303.441 appears to be unnecessary. The Board invites the participants to comment on this proposed repeal.

## **CONCLUSION**

The Board thoroughly reviewed the record in this proceeding and finds that proceeding to first notice with recreational use designations for individual reaches of the CAWS and LDPR is appropriate. The Board will propose for first notice the recreational use designations as proposed by the IEPA with no significant alterations. The Board will not proceed with proposed amendment to Section 302.402 at this time and will amend the language of Section 303.204. Also the Board proposes to repeal Section 303.441, a section not a part of the IEPA's proposal.

The Board has thoroughly examined the substantial record in this proceeding, including the UAA studies for the CAWS and LDPR, as well as the testimony and comments of numerous participants. The record clearly demonstrates that the CAWS and LDPR cannot attain the Clean Water Act goal of recreating in and on the water (swimmable) at this time. However, the record provides clear evidence of existing recreational uses in the CAWS and LDPR that must be protected. Therefore, the Board sends to first notice a proposal that individual reaches of the CAWS and LDPR will be designated either as incidental contact recreation, non-contact recreation, or non-recreational waters as listed in Table 5 on pages 80 and 81 of this opinion.

### **ORDER**

The Board directs the Clerk to cause the publication of the following rule in the *Illinois Register* for first notice:

TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE C: WATER POLLUTION  
CHAPTER I: POLLUTION CONTROL BOARD

PART 301  
INTRODUCTION

Section	
301.101	Authority
301.102	Policy
301.103	Repeals
301.104	Analytical Testing
301.105	References to Other Sections
301.106	Incorporations by Reference
301.107	Severability
301.108	Adjusted Standards
301.200	Definitions
301.205	Act
301.210	Administrator
301.215	Agency
301.220	Aquatic Life
301.221	Area of Concern
301.225	Artificial Cooling Lake
301.230	Basin
301.231	Bioaccumulative Chemicals of Concern

301.235	Board
301.240	CWA
301.245	Calumet River System
<u>301.247</u>	<u>Chicago Area Waterway System</u>
301.250	Chicago River System
301.255	Combined Sewer
301.260	Combined Sewer Service Area
301.265	Construction
301.267	Conversion Factor
301.270	Dilution Ratio
301.275	Effluent
301.280	Hearing Board
<u>301.282</u>	<u>Incidental Contact Recreation</u>
301.285	Industrial Wastes
301.290	Institute
301.295	Interstate Waters
301.300	Intrastate Waters
301.301	Lake Michigan Lakewide Management Plan
301.305	Land Runoff
<u>301.307</u>	<u>Lower Des Plaines River</u>
301.310	Marine Toilet
301.311	Method Detection Level
301.312	Minimum Level
301.313	Metals Translator
301.315	Modification
301.320	New Source
<u>301.323</u>	<u>Non-Contact Recreation</u>
<u>301.324</u>	<u>Non-Recreational</u>
301.325	NPDES
301.330	Other Wastes
301.331	Outlier
301.335	Person
301.340	Pollutant
301.341	Pollutant Minimization Program
301.345	Population Equivalent
301.346	Preliminary Effluent Limitation
301.350	Pretreatment Works
301.355	Primary Contact
301.356	Projected Effluent Quality
301.360	Public and Food Processing Water Supply
301.365	Publicly Owned Treatment Works
301.370	Publicly Regulated Treatment Works
301.371	Quantification Level
301.372	Reasonable Potential Analysis
301.373	Same Body of Water
301.375	Sanitary Sewer

301.380	Secondary Contact
301.385	Sewage
301.390	Sewer
301.395	Sludge
301.400	Standard of Performance
301.405	STORET
301.410	Storm Sewer
301.411	Total Maximum Daily Load
301.413	Total Metal
301.415	Treatment Works
301.420	Underground Waters
301.421	Wasteload Allocation
301.425	Wastewater
301.430	Wastewater Source
301.435	Watercraft
301.440	Waters
301.441	Water Quality Based Effluent Limitation
301.442	Wet Weather Point Source
301.443	Whole Effluent Toxicity

#### APPENDIX A References to Previous Rules

**AUTHORITY:** Implementing Section 13 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/13 and 27].

**SOURCE:** Filed with the Secretary of State January 1, 1978; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; amended at 5 Ill. Reg. 6384, effective May 28, 1981; codified at 6 Ill. Reg. 7818; amended in R88-1 at 13 Ill. Reg. 5984, effective April 18, 1989; amended in R88-21(A) at 14 Ill. Reg. 2879, effective February 13, 1990; amended in R99-8 at 23 Ill. Reg. 11277, effective August 26, 1999; amended in R02-11 at 27 Ill. Reg. 158, effective December 20, 2002; amended in R08-9(A) at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

#### Section 301.247 Chicago Area Waterway System

“Chicago Area Waterway System” means Calumet River, Grand Calumet River, Little Calumet River downstream from the confluence of Calumet River and Grand Calumet River, Calumet-Sag Channel, Lake Calumet, Chicago River and its branches downstream from their confluence with North Shore Channel, North Shore Channel and Chicago Sanitary and Ship Canal.

(Source: Added at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

#### Section 301.282 Incidental Contact Recreation

“Incidental Contact Recreation” means any recreational activity in which human contact with the water is incidental and in which the probability of ingesting appreciable quantities of water is

minimal, such as fishing; commercial boating; small craft recreational boating; and any limited contact associated with shoreline activity such as wading.

(Source: Added at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 301.307 Lower Des Plaines River

“Lower Des Plaines River” means Des Plaines River from the confluence with Chicago Sanitary and Ship Canal to the Interstate 55 Bridge.

(Source: Added at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 301.323 Non-Contact Recreation

“Non-contact Recreation” means any recreational or other water use 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 direct human contact unlikely or dangerous.

(Source: Added at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 301.324 Non-Recreational

“Non-recreational” means a water body where the physical conditions or hydrologic modifications preclude primary contact, incidental contact and non-contact recreation.

(Source: Added at 34 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE C: WATER POLLUTION  
CHAPTER I: POLLUTION CONTROL BOARD

PART 303

WATER USE DESIGNATIONS AND SITE-SPECIFIC WATER QUALITY STANDARDS

SUBPART A: GENERAL PROVISIONS

- Section
- 303.100 Scope and Applicability
- 303.101 Multiple Designations
- 303.102 Rulemaking Required (Repealed)

SUBPART B: NONSPECIFIC WATER USE DESIGNATIONS

Section

303.200	Scope and Applicability
303.201	General Use Waters
303.202	Public and Food Processing Water Supplies
303.203	Underground Waters
303.204	<u>Chicago Area Waterway System and Lower Des Plaines River</u> <del>Secondary Contact and Indigenous Aquatic Life Waters</del>
303.205	Outstanding Resource Waters
303.206	List of Outstanding Resource Waters
303.220	<u>Incidental Contact Recreation Waters</u>
303.225	<u>Non-Contact Recreation Waters</u>
303.227	<u>Non-Recreational Waters</u>

### SUBPART C: SPECIFIC USE DESIGNATIONS AND SITE SPECIFIC WATER QUALITY STANDARDS

Section	
303.300	Scope and Applicability
303.301	Organization
303.311	Ohio River Temperature
303.312	Waters Receiving Fluorspar Mine Drainage
303.321	Wabash River Temperature
303.322	Unnamed Tributary of the Vermilion River
303.323	Sugar Creek and Its Unnamed Tributary
303.326	Unnamed Tributary of Salt Creek, Salt Creek, and Little Wabash River
303.331	Mississippi River North Temperature
303.341	Mississippi River North Central Temperature
303.351	Mississippi River South Central Temperature
303.352	Unnamed Tributary of Wood River Creek
303.353	Schoenberger Creek; Unnamed Tributary of Cahokia Canal
303.361	Mississippi River South Temperature
303.400	Bankline Disposal Along the Illinois Waterway/River
303.430	Unnamed Tributary to Dutch Creek
303.431	Long Point Slough and Its Unnamed Tributary
303.441	Secondary Contact Waters ( <u>Repealed</u> )
303.442	Waters Not Designated for Public Water Supply
303.443	Lake Michigan Basin
303.444	Salt Creek, Higgins Creek, West Branch of the DuPage River, Des Plaines River
303.445	Total Dissolved Solids Water Quality Standard for the Lower Des Plaines River
303.446	Boron Water Quality Standard for Segments of the Sangamon River and the Illinois River
303.447	Unnamed Tributary of the South Branch Edwards River and South Branch Edwards River
303.448	Mud Run Creek

### SUBPART D: THERMAL DISCHARGES

Section  
 303.500 Scope and Applicability  
 303.501 Lake Sangchris Thermal Discharges

303.APPENDIX A References to Previous Rules  
 303.APPENDIX B Sources of Codified Sections

**AUTHORITY:** Implementing Section 13 and authorized by Sections 11(b) and 27 of the Environmental Protection Act [415 ILCS 5/13, 11(b) and 27].

**SOURCE:** Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 27, p. 221, effective July 5, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 5 Ill. Reg. 11592, effective October 19, 1981; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 7 Ill. Reg. 8111, effective June 23, 1983; amended in R87-27 at 12 Ill. Reg. 9917, effective May 27, 1988; amended in R87-2 at 13 Ill. Reg. 15649, effective September 22, 1989; amended in R87-36 at 14 Ill. Reg. 9460, effective May 31, 1990; amended in R86-14 at 14 Ill. Reg. 20724, effective December 18, 1990; amended in R89-14(C) at 16 Ill. Reg. 14684, effective September 10, 1992; amended in R92-17 at 18 Ill. Reg. 2981, effective February 14, 1994; amended in R91-23 at 18 Ill. Reg. 13457, effective August 19, 1994; amended in R93-13 at 19 Ill. Reg. 1310, effective January 30, 1995; amended in R95-14 at 20 Ill. Reg. 3534, effective February 8, 1996; amended in R97-25 at 22 Ill. Reg. 1403, effective December 24, 1997; amended in R01-13 at 26 Ill. Reg. 3517, effective February 22, 2002; amended in R03-11 at 28 Ill. Reg. 3071, effective February 4, 2004; amended in R06-24 at 31 Ill. Reg. 4440, effective February 27, 2007; amended in R09-8 at 33 Ill. Reg. 7903 effective May 29, 2009; amended in R09-11 at 33 Ill. Reg. 12258, effective August 11, 2009; amended in R08-9(A) at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

### **SUBPART A: GENERAL PROVISIONS**

Section 303.102 Rulemaking Required (Repealed)

~~Designation of waters to meet secondary contact and indigenous aquatic life standards is governed by Part 102 of Subtitle A.~~

(Source: Repealed at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **SUBPART B: NONSPECIFIC WATER USE DESIGNATIONS**

Section 303.204 Chicago Area Waterway System and Lower Des Plaines River ~~Secondary Contact and Indigenous Aquatic Life Waters~~

The Chicago Area Waterway System and Lower Des Plaines River Waters which are designated to protect for incidental contact or non-contact recreational uses, except where designated as

non-recreational waters; commercial activity, including navigation and industrial water supply uses, limited only by the physical condition of these waters and hydrologic modifications to these waters. These waters are required to meet the secondary contact and indigenous aquatic life standards contained in of Subpart D, of Part 302, but are not required to meet the general use standards or the public and food processing water supply standards of Subparts B and C, of Part 302. Designated recreational uses for each segment of the Chicago Area Waterway System and Lower Des Plaines River are identified in this Subpart.

(Source: Amended at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### 303.220 Incidental Contact Recreation Waters

The following waters are designated as Incidental Contact Recreation waters and must protect for incidental contact recreational uses as defined in 35 Ill. Adm. Code 301.282.

- a) North Shore Channel;
- b) North Branch Chicago River from its confluence with North Shore Channel to its confluence with South Branch Chicago River and Chicago River;
- c) Chicago River;
- d) South Branch Chicago River and its South Fork;
- e) Chicago Sanitary and Ship Canal from its confluence with South Branch Chicago River to its confluence with Calumet-Sag Channel;
- f) Calumet River, from Torrence Avenue to its confluence with Grand Calumet River and Little Calumet River;
- g) Lake Calumet;
- h) Lake Calumet Connecting Channel;
- i) Grand Calumet River;
- j) Little Calumet River from its confluence with Calumet River and Grand Calumet River to its confluence with Calumet-Sag Channel;
- k) Calumet-Sag Channel; and
- l) Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge.

(Source: Added at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

303.225 Non-Contact Recreation Waters

Calumet River from Lake Michigan to Torrence Avenue is designated as a Non-Contact Recreation water and must protect for non-contact recreational uses as defined in 35 Ill. Adm. Code 301.323.

(Source: Added at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

303.227 Non-Recreational Waters

The following waters are designated as Non-Recreational waters as defined in 35 Ill. Adm. Code 301.324.

- a) Chicago Sanitary and Ship Canal from its confluence with the Calumet-Sag Channel to its confluence with Des Plaines River; and
- b) Lower Des Plaines River from its confluence with Chicago Sanitary and Ship Canal to the Brandon Road Lock and Dam.

(Source: Added at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 303.441 Secondary Contact Waters (Repealed)

~~The following are designated as secondary contact and indigenous aquatic life waters and must meet the water quality standards of 35 Ill. Adm. Code 302.Subpart D:~~

- ~~a) The Chicago Sanitary and Ship Canal;~~
- ~~b) The Calumet-Sag Channel;~~
- ~~e) The Little Calumet River from its junction with the Grand Calumet River to the Calumet-Sag Channel;~~
- ~~d) The Grand Calumet River;~~
- ~~e) The Calumet River, except the 6.8 mile segment extending from the O'Brien Locks and Dam to Lake Michigan;~~
- ~~f) Lake Calumet;~~
- ~~g) The South Branch of the Chicago River;~~
- ~~h) The North Branch of the Chicago River from its confluence with the North Shore Channel to its confluence with the South Branch;~~

- i) ~~The Des Plaines River from its confluence with the Chicago Sanitary and Ship Canal to the Interstate 55 bridge; and~~
- j) ~~The North Shore Channel, excluding the segment extending from the North Side Sewage Treatment Works to Lake Michigan. The dissolved oxygen in said Channel shall be not less than 5 mg/l during 16 hours of any 24 hour period, nor less than 4 mg/l at any time.~~

(Source: Repealed at \_\_\_\_\_ Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

IT IS SO ORDERED.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on August 5, 2010, by a vote of 5-0.



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John T. Therriault, Assistant Clerk  
Illinois Pollution Control Board