In The
Supreme Court of the United States
October Term, 1966

STATES OF WISCONSIN, MINNESOTA, OHIO, AND PENNSYLVANIA, *Complainants*, *v.* STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*, UNITED STATES OF AMERICA, *Intervenor*.	No. 1 Original
STATE OF MICHIGAN, *Complainant*, *v.* STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*, UNITED STATES OF AMERICA, *Intervenor*.	No. 2 Original
STATE OF NEW YORK, *Complainant*, *v.* STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*, UNITED STATES OF AMERICA, *Intervenor*.	No. 3 Original

APPENDIX OF STATE OF ILLINOIS

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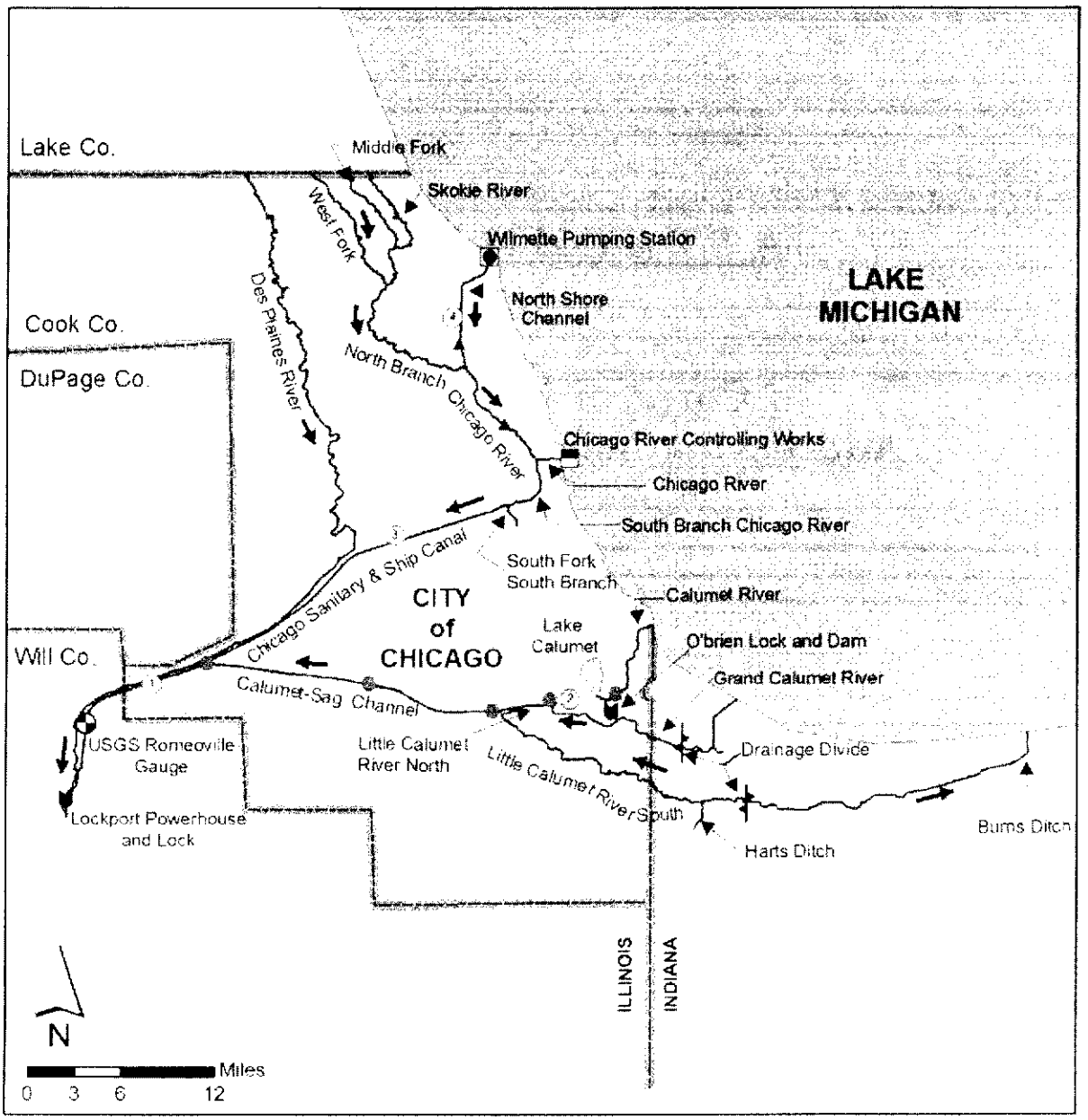

Structures

- Control Gate
- USGS Gauge
- Lock and Dam
- Pumping Station

Major Lakes — Major Rivers — County Boundaries — Direction of Flow

Supplemental Aeration

- Aeration Station
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Water Reclamation Plants

1. Lemont WRP
2. Calumet WRP
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AFFIDAVIT OF STEVEN J. SHULTS

Steven J. Shults being first duly sworn, deposes and states as follows:

1. I have worked at the Illinois Department of Natural Resources ("IDNR") for 15 years. Before starting work at the IDNR, I earned an Associate's Degree from Illinois Central College with a major in Chemistry and a Bachelor's of Science Degree from Bradley University with a double major in Environmental Science and Biology.

2. Since joining the IDNR, I have always worked in the Division of Fisheries. First, I worked on fish health management issues as a microbiologist at a fish hatchery. Then I became a manager of both the Aquaculture Program and the Aquatic Nuisance Species Program. The Aquatic Nuisance Species Program monitors, controls, and sometimes eradicates non-native species which appear to be taking hold in Illinois. I am currently a Natural Resource Management Supervisor overseeing a field and administrative staff.

3. Through my IDNR work, I am also active in professional organizations which deal with the problem of invasive aquatic species in the Midwest, Great Lakes, and Mississippi River Basin regions. For example, I am a member of the American Fisheries Society, the Illinois Aquaculture Industry Association, the Illinois Lake Management Association, and the Mississippi River Basin Panel for Aquatic Nuisance Species.

4. In addition, I have participated on the Great Lakes Panel on Aquatic Nuisance Species, the Mississippi Interstate Cooperative Resource Association, and the Asian Carp Rapid Response Workgroup. I have presented numerous talks and papers on the threat Asian Carp pose to the Great Lakes.

5. Recently, I served as the Incident Commander designing, planning, and implementing the Asian Carp Rapid Response Plan which occurred in early December 2009.

6. I am familiar with some of the efforts made by the federal government, Illinois, other states, and Canada related to preventing Asian Carp from migrating to and taking hold in the Great Lakes.

7. Illinois, for example, began monitoring waterways after it was determined that Asian Carp had taken hold in the Mississippi River and were migrating northward.

8. Southern states used Asian Carp to help clean farm ponds for aquacultural purposes. Unfortunately, during flood events, Asian Carp escaped the ponds and eventually took hold in the Mississippi River.

9. In 1990 Congress passed the Nonindigenous Aquatic Nuisance Prevention and Control Act designating the Great Lakes Commission as administrator of the Great Lakes Panel on Aquatic Nuisance Species. Many federal agencies participate on the Panel including the U.S. Fish and Wildlife Service, the U.S. EPA, and the U.S. Army Corps of Engineers.

10. In addition to Illinois, the Great Lakes Panel on Aquatic Nuisance Species also includes representatives from the states of Michigan, Minnesota, Indiana, Ohio, New York, Pennsylvania, Wisconsin, and the Canadian provinces of Ontario and Quebec.

11. By the mid 1990s, Illinois' monitoring efforts reported increased Asian Carp collection by commercial fishermen and noted the spread of Asian Carp into the Illinois River.

12. Ever since the mid 1990s, Illinois has analyzed commercial fishing rates for Asian Carp.

13. The Great Lakes Panel provides guidance on aquatic nuisance species research, policies, and educational programs. The Asian Carp is an aquatic nuisance species.

14. Monitoring, commercial fishing, and regional meetings related to the Asian Carp have been ongoing since the early 90s.

15. In the mid to late 90s, Illinois participated in the Dispersal Barrier Advisory Panel which assessed and planned a barrier system in the Chicago Ship and Sanitary Canal ("CSSC") designed to prevent the migration of invasive species to and from Lake Michigan and other connected Illinois waterways. Illinois and the federal government funded the construction of the original barrier on the CSSC. The barriers are controlled and operated by the U.S. Army Corps of Engineers.

16. Illinois has assisted in monitoring the efficacy of the electric barrier system since it was first installed and will continue to do so.

17. Though the CSSC is a direct route linking Lake Michigan with other Illinois waterways, it is not the only way that Asian Carp can get into Lake Michigan. For example, people can also introduce Asian Carp into the Great Lakes as has been reported in Lake Erie.

18. Also people were concerned that the electric barrier system in the CSSC might fail. Thus, in the early 2000s, Illinois participated with other federal agencies in the Asian Carp Rapid Response Workgroup. By April 2004, Illinois prepared an emergency response plan to protect the Great Lakes by removing Asian Carp from the Lower Lockport Pool of the CSSC should they reach that point on the canal. Illinois and other agencies continued to monitor the CSSC and other Illinois waterways for the presence of Asian Carp.

19. Also, the U.S. Army Corps of Engineers constructed another electric barrier in the CSSC to further reduce the risk of Asian Carp getting through and into the Great Lakes.

20. Sometime in 2009, the U.S. Army Corps of Engineers contracted with the University of Notre Dame to take eDNA (environmental DNA) samples to determine the presence of Asian Carp in the CSSC below the electric barrier. The Corps and University reported that eDNA samples taken in the spring of 2009 were positive for the presence of Asian Carp.

21. Illinois responded to their reports of Asian Carp eDNA in several ways. First, Illinois intensified monitoring efforts by increasing electrofishing and various types of net fishing in the CSSC to attempt to confirm the eDNA sample results. Second, Illinois consulted with the U.S. Army Corps of Engineers about increasing the voltage on the electric barrier to prevent especially juvenile Asian Carp from getting through the barrier. Third, Illinois participated in numerous meetings and conference calls with other federal and state agencies to address the U.S. Army Corps' need to shut down the electric barrier for maintenance. And Fourth, Illinois took the lead for the Asian Carp Rapid Response Workgroup by drafting and implementing the Asian Carp Rapid Response Plan. Some of

the agencies represented in the Workgroup included, in addition to the IDNR, Wisconsin Sea Grant, Metropolitan Water Reclamation District of Chicago, U.S. Fish and Wildlife Service, U.S. EPA, and U.S. Army Corps of Engineers.

22. The Asian Carp Rapid Response Plan called for applying Rotenone, a piscicide which would kill all fish, to about six miles of the CSSC starting just above the electric barrier near Romeoville, Illinois flowing downstream toward Lockport, Illinois so that no fish could get past the barrier when it was shut down for maintenance. In order to accomplish this large, expensive project Illinois reached out to other states, federal agencies, and Canada to help with implementing the plan. Michigan, Indiana, Wisconsin, and Canada provided personnel and equipment to help implement the Plan. New York, Pennsylvania, Minnesota, and Ohio participated by making contributions to the plan implementation.

23. Illinois could not confirm reported eDNA results using any fishing techniques before applying Rotenone to the CSSC in December 2009. In other words, no Asian Carp were found in the CSSC before the Rotenone application. After applying Rotenone to the stretch of canal below the barrier, tens of thousands of fish were killed and collected one of which was identified as an Asian Carp.

24. In November 2009, the U.S. Army Corps of Engineers and the University of Notre Dame again reported positive eDNA results, but this report was for samples collected in September above the electric barrier closer to Lake Michigan in the Cal-Sag Channel below the O'Brien Lock and Dam.

25. Though the Rapid Response Plan did not call for any activity many miles above the electric barrier, the Incident Command and general staff decided to sample the area below the O'Brien Lock in another attempt to confirm eDNA results. Based on that decision, Illinois contracted with a commercial fisherman experienced in fishing for Asian Carp. The commercial fisherman, assisted by IDNR and U.S. Fish and Wildlife biologists, electrofished and net fished areas of the Cal-Sag Channel where positive eDNA samples were collected. They caught and identified more than a thousand fish. No Asian Carp were caught or identified.

26. The completion of the December 2009 Asian Carp Rapid Response Plan is less than a month old. It is far too soon to know the cost of the operation. However, early budget estimates indicate the Plan will cost the State of Illinois, IDNR, more than $3,000,000. Some of that will be reimbursed through the federal government. And, it should be noted that figure does not include the costs borne by other states, federal agencies, and Canada.

27. The state of Illinois will continue to monitor the waterways for the presence of Asian Carp (and other invasive species) and work with others to prevent Asian Carp from getting into Lake Michigan through the CSSC.

28. Since at least the early 1990s, Illinois has contributed significant resources to the problem of invasive aquatic species including Asian Carp.

29. The Great Lakes States, Canada, and the Federal Government have been working together on the general issue of invasive species, and the specific issue of Asian Carp migration for more than ten years.

FURTHER AFFIANT SAYETH NOT

Steven J. Shults

Steven J. Shults

SUBSCRIBED and SWORN to before me
this 4th day of January, 2010

Josie Walter

NOTARY PUBLIC

NOTARY PUBLIC OFFICIAL SEAL STATE OF ILLINOIS
JOSIE WALTER
MY COMMISSION EXPIRES
SEPTEMBER 11, 2010

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AFFIDAVIT OF DANIEL INJERD

Daniel Injerd, being first duly sworn, deposes and states as follows:

1. I am the Manager of the Lake Michigan Section of the Office of Water Resources for the Illinois Department of Natural Resources (the "Department").

2. I have been the Manager of the Lake Michigan Section for the last 30 years. In this position, I am responsible for Illinois' Lake Michigan Water Allocation program which is the regulatory program to ensure compliance with the Consent Decree in Wisconsin v. Illinois.

3. As Manager of the Lake Michigan Section, I have worked extensively with the United States Army Corps of Engineers ("Corps"), specifically with respect to their operation of the federal locks at both the Chicago Controlling Works and the O'Brien Lock and Dam. These federal locks allow for navigation from the Great Lakes, through Illinois, to the Mississippi River.

4. The Corps controls and operates both locks under their federal jurisdiction. The State of Illinois has no authority or ability to direct the Corps to close and / or cease operations of same.

5. As Manager of the Lake Michigan Section, I have worked extensively with the United States Army Corps of Engineers ("Corps"), specifically with respect to their operation of the Electrical Disbursal Barrier System. The Electrical Disbursal Barrier System is located in the Chicago Sanitary and Ship Canal approximately 37 river miles south of the Calumet River entrance to Lake Michigan. The purposed of the Electrical Disbursal Barrier System is to prohibit the migration of invasive species through the Chicago Sanitary and Ship Canal.

6. The Corps controls and operates the Electrical Disbursal Barrier System under their federal jurisdiction. The State of Illinois has no authority or ability to direct the Corps to close and / or cease operations of same.

7. As Manager of the Lake Michigan Section, I have worked extensively with the Metropolitan Water Reclamation District of Greater Chicago ("District"), specifically with respect to their operation of sluice gates at the Chicago Controlling Works, the O'Brien Lock and Dam and the Wilmette Pumping Station.

8. The District controls and operates the sluice gates at the Chicago Controlling Works, the O'Brien Lock and Dam and the Wilmette Pumping Station. The operation of these gates to divert Lake Michigan water is regulated as to the maximum allowable amount of such diversion by the Illinois Department of Natural Resources pursuant to the Lake Michigan Water Allocation program. Provided that the District uses the water for the purposes allocated and does not exceed its allocated amount of Lake Michigan water diversion, the Illinois Department of Natural Resources has no authority or ability to direct the District's operation of said sluice gates.

FURTHER AFFIANT SAYETH NOT

Daniel Injerd

SUBSCRIBED and SWORN to before me
this 4th Day of January, 2010

NOTARY PUBLIC

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STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

AFFIDAVIT

ROBERT B. SULSKI, being first duly sworn upon oath, deposes and states that I have personal knowledge as follows:

1. I hold a B.A. in Zoology and an M.A in Environmental Engineering from Southern Illinois University at Carbondale. I have worked for the Bureau of Water in the Illinois Environmental Protection Agency (IEPA) for 25 years.

2. In the last 6 years I have worked as a water pollution programs manager on water quality and compliance and monitoring issues in the Chicago Metropolitan Area, including Use Attainability Analysis, Total Maximum Daily Load, non-point source pollution, water quality standards, state and NPDES permit issuance and re-issuance and federal and state enforcement action programs.

3. During this time I also have represented IEPA on the interagency Aquatic Nuisance Species Dispersal Barrier Panel.

4. Prior to my duties as a programs manager, I worked for 19 years as a water pollution control compliance engineer, during which time I monitored major facilities that discharge into the Chicago Area Waterway Systems (CAWS) and assisted in efforts to remedy water quality problems in CAWS and Lake Michigan.

5. The CAWS watershed contains about half of Illinois' population. It also is the receiving stream of some of the largest dischargers in the State, and in some cases the nation, including the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Midwest Generation coal fired power plants, and numerous chemical manufacturing facilities.

6. The dense urban nature of the Chicago Metropolitan area and the configuration of its waterways have made solutions to ongoing water quality issues uniquely challenging. To begin, CAWS has been modified to protect Lake Michigan from domestic wastewater loadings, to mitigate flooding from massive storm water loadings, and to enhance waterway commerce between the Great Lakes and Mississippi River basins.

7. The modifications include a reversal of the original flow direction of the waterways away from the lake, which was accomplished by deepening and widening the

existing waterways and by constructing new channels and control structures where none previously existed.

8. The resultant deep-draft, vertical-walled, low- or no-flow velocity waterways and channels limit natural aeration and cooling.

9. Additionally, much of the area was constructed with combined sewers, which carry both storm water and wastewater in a single system of pipes that overflow to CAWS during extreme storm events and further exacerbate low, sometimes zero dissolved oxygen (D.O.) conditions.

10. The low or zero D.O. conditions have been addressed to some extent in parts, but not all, of CAWS, through the installation of in-stream and side-stream, supplemental aeration units. Such units do not exist or are undersized in the Chicago River system.

11. Improvements in low D.O. conditions in the Chicago River system are not expected to occur prior to the next 5- to 15-year timeframe, when MWRDC's combined sewer overflow Long Term Control Plan is completed and, if further necessary, additional supplemental aeration units and CAWS flow redistribution systems are installed.

12. In the interim, discretionary diversion from Lake Michigan is the only means available for mitigating periodic low or zero D.O. conditions that can result in extremely noxious conditions, including mass fish kills. Discretionary diversion is accomplished primarily through sluice gates and secondarily through pumps.

13. The sluice gates are located at the Wilmette Pumping Station, the Chicago River lock and the O'Brien Lock and have the capability of diverting upwards of 13,800 cfs from the lake into the rivers.

14. The pumps are located at Wilmette and Chicago River and have a much more limited maximum diversion capacity of only 140 cfs. 140 cfs may not be enough to overcome D.O. sags that can lead to noxious conditions and fish kills.

FURTHER AFFIANT SAYETH NAUGHT.

Robert B. Sulski

ROBERT B. SULSKI

Subscribed and Sworn to before me
this 4th day of January, 2010.

Darlene F. Armstrong-Barnes

NOTARY PUBLIC

NOTARY PUBLIC OFFICIAL SEAL STATE OF ILLINOIS
DARLENE F. ARMSTRONG-BARNES
MY COMMISSION EXPIRES
NOVEMBER 15, 2010

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AFFIDAVIT OF SUZANNE MALEC-MCKENNA

Suzanne Malec-McKenna, being first duly sworn, states as follows:

1. I am employed by the City of Chicago (the "City") as the Commissioner of the Department of Environment. I have been the City's Commissioner of Environment since August 2007. My duties as Commissioner of Environment include carrying out the department's mission of protecting human health and the environment, and improving the urban quality of life. I have served for nearly 16 years in the Department of Environment, most recently as Deputy Commissioner of Natural Resources and Water Quality prior to becoming Commissioner. As Commissioner, I oversee Permitting and Enforcement, Energy and Sustainable Business, Brownfields Restoration, Natural Resources and Water Quality and Green Building promotion and analysis.

2. The City does not operate or control the locks and sluice gates that are the subject of the Motion for Preliminary Injunction. However, the Chicago Controlling Works and significant portions of the Chicago River, the Chicago Sanitary and Ship Canal, and the North Shore Channel are located within the City of Chicago's limits. In addition, Lake Michigan is the sole source for the City's municipal potable water supply.

3. In April 2003, the Chicago City Council enacted an ordinance prohibiting the release or introduction of regulated invasive species, including silver and bighead carp ("Asian carp"), into the environment anywhere within the City of Chicago. See Municipal Code of Chicago, section 11-4-3000, *et. seq.* (2009).

4. In May 2003, Chicago Mayor Richard M. Daley and the City's Department of Environment, along with the United States Fish and Wildlife Service, convened the first Great Lakes Aquatic Invasive Species Summit to generate ideas for halting the exchange of invasive species between the Great Lakes and Mississippi River drainage basins.

5. The City recognizes that Asian carp represent a significant threat to the Great Lakes ecosystem and that all reasonable means should be employed to keep Asian carp from entering Lake Michigan. Furthermore, the City acknowledges the need for a comprehensive and long-term strategy to address the migration of Asian carp and other invasive species between the Great Lakes and Mississippi River drainage basins. Toward this end, the City supports the eventual permanent ecological separation of the two drainage basins, and urges that a comprehensive and detailed feasibility study be completed in the near-term. This feasibility study should assess the environmental, water quality, public health, navigational, and economic impacts of ecologically separating the two drainage basins. The City also

urges the evaluation of various methods to accomplish the ecological separation, such as a biological eradication zone and acoustic technologies.

6. Due to the complex nature of the Chicago-area waterway system, the City supports a long-term solution that is consistent with the unique functions and limitations of the O'Brien Lock and Dam, the Chicago Controlling Works, and the Wilmette Pumping Station. The City asserts that any feasible long-term solution must treat each lock, sluice gate, and pumping station differently and that the one-size-fits-all approach proposed by the State of Michigan ("Michigan") in its Motion for Preliminary Injunction is incompatible with the unique attributes of those infrastructure assets.

7. In the near-term, the City supports the operation of the existing Electrical Dispersal Barrier System at the highest level possible that is consistent with human safety. Furthermore, the City supports the completion of the proposed Electrical Dispersal Barrier IIB as soon as possible. The City also supports a comprehensive monitoring program in the waterways between Lake Michigan and the Lockport Powerhouse and Lock, in line with those efforts already undertaken by the State of Illinois and the United States Army Corps of Engineers ("Army Corps"). And, the City supports the United States Coast Guard's efforts to prohibit vessels from carrying bilge water through the Lockport Powerhouse and Lock into the Chicago waterway system.

8. According to information provided by the City's Police Department, the Chicago Police Department's ("CPD") Marine and Helicopter Unit is the primary response agency for law enforcement, homeland security, and marine distress emergencies along the approximately eighty-one miles of waterways and twenty-seven miles of lakefront within the City of Chicago. The CPD's Marine Operations employs eight vessels to carry out its mission critical responsibilities. The CPD's Marine Operations would be immensely impacted in the performance of its mission critical duties if the locks at the Chicago Controlling Works and the O'Brien Lock and Dam were closed pursuant to Michigan's proposed injunction. During colder times of the year when ice is present, the CPD's Marine Operations would have no response capability to Lake Michigan if the locks were closed pursuant to Michigan's proposed injunction. Even when no ice is present, in the event of a lock shutdown, response times for the CPD's Marine Operations would lengthen considerably to the detriment of public health and safety as the CPD would have to reallocate its marine resources and personnel over land rather than through the locks. The CPD's Marine Operations is docked, maintained, and based at 250 North Breakwater Access Drive (on the Chicago River just west of the Chicago Controlling Works). This maritime law enforcement facility contains the Unites States Coast Guard, the Illinois Department of Natural Resources ("IDNR") Conservation Police and the Chicago Police Department's Marine Operations. These three agencies work hand-in-hand to protect the City's waterways and secure numerous high

profile threat assessed targets along Lake Michigan, the Chicago River, and other Chicago inland waterways. In addition to enforcing the Municipal Code of Chicago, Marine Operations Officers enforce state law and assist the United States Coast Guard and the IDNR Conservation Police in protecting established safety zones for special events and high profile threat assessed targets. The City's regular law enforcement activities include patrolling one of the largest harbor systems in the country, consisting of nine harbors directly within the City of Chicago and additional harbors on the Chicago and Calumet Rivers. The CPD's jurisdiction extends to three miles offshore into Lake Michigan. Homeland security is a key responsibility within the jurisdiction of the CPD's Marine Operations. The CPD's vessels regularly patrol and respond to various high profile threat assessed targets along the lakefront (including critical municipal infrastructure) and the Chicago and Calumet Rivers, as well as the Chicago Sanitary and Ship Canal. For example, homeland security checks at these locations typically number between seven hundred and eight hundred times per month and are vital to securing these targets along the shores of both Lake Michigan and Chicago's inland waterways. Marine distress calls are regularly received by the CPD's Marine Operations and must be responded to immediately in order to protect life along the lakefront and within the inland waterway system of Chicago. The CPD's Marine Operations responds within Lake Michigan approximately three hundred times per month on average during the boating season (May through November) and approximately thirty times per month on average during the off-season in order to perform its law enforcement

duties, and to safely and expeditiously respond to marine distress calls, and to preserve life and property.

9. According to information provided by the City's Office of Emergency Management and Communications ("OEMC") and the Chicago Fire Department ("CFD"), the CFD's Air Sea Rescue Division docks and maintains its emergency response watercraft (one 96-foot fireboat, which is designated as Engine 58, and one 33-foot fire/rescue boat) in Lake Michigan. As such, these fire vessels would be unable to access Chicago's inland waterways to respond to emergencies in those waterways if the locks at the Chicago Controlling Works and the O'Brien Lock and Dam were closed pursuant to Michigan's proposed injunction. Engine 58 is docked in Lake Michigan year-round and is staffed twenty-four hours per day, while the smaller fast rescue boat is in service from approximately April 1st to November 1st. Engine 58 is capable of delivering in excess of 14,000 gallons of water per minute. In addition to supplying river water to land-based fire engines operating at structure fires near Chicago's inland waterways, Engine 58 is also the primary means for water supply to the City's central business district should a disruption occur (infrastructure failure or result of a terrorist incident) in the existing water main system. By being able to pump water directly from Chicago's inland waterways, Engine 58 provides critical firefighting water supplies in the event that land-based water mains either are inaccessible to land-based vehicles (which is the case for many structures immediately adjacent to Chicago's inland waterways) or

have been compromised for whatever reason. For example, during the September 11, 2001 attack on New York City, the New York City Fire Department relied upon its water-based fireboats to provide water critical to its land-based firefighting operations. The normal water main/hydrant system was inoperable as a result of the collapse of the World Trade Center buildings. CFD's water-based support operations are included within the City's Emergency Operations Plan, which was adopted pursuant to federal guidelines and for which the City receives federal monies. In addition to responding to incidents along waterways within the City limits, CFD's Air Sea Rescue Division also responds outside of the City limits when requested by other municipalities through our Mutual Aid Box Alarm System mutual aid pact. The CFD's Air Sea Rescue Division responds to drownings, boats in distress, and incidents involving aircraft or automobiles falling into Lake Michigan or Chicago's inland waterways, as well as fires on watercraft or in structures along Chicago's inland waterways. The CFD's Air Sea Rescue Division also responds to and mitigates hazardous materials incidents on Chicago's inland waterways. In an average year, CFD's Air Sea Rescue Division passes through the locks at the Chicago Controlling Works and the O'Brien Lock and Dam approximately two hundred fifty times in responding to and returning from emergencies on Chicago's inland waterways. During 2009, the CFD's Air Sea Rescue Division responded to approximately one hundred sixty-five incidents in and along Chicago's inland waterways. These incidents have ranged from water rescues to fires. The closure of the locks at the Chicago Controlling Works and the O'Brien

Lock and Dam would critically hamper the City's ability to respond to, mitigate, and recover from a large-scale incident along Chicago's inland waterways or within Chicago's central business district, which sits adjacent to the Chicago River and is occupied by more than one million people on an average work day.

10. According to information provided by the City's OEMC, even if the lock at the Chicago Controlling Works were permitted to open for brief periods to allow passage of CFD's water vessels into Chicago's inland waterways in the event of an emergency, the immediate re-closure of the lock could prevent the 96-foot fireboat from traveling up river from Lake Michigan during significant precipitation events. The lock and sluice gates provide a critical means of lowering Chicago River water levels during high water events and high water levels prevent Engine 58 from passing under the numerous bridges that pass over Chicago's inland waterways. Although thirty-seven bridges over Chicago's inland waterways can be raised, there are select bridges that cannot be raised during an emergency since they support mass transit lines and critical evacuation routes as designated by the City's OEMC Evacuation Plan for the central business district. Furthermore, having to wait to raise the bridges rather than using the locks and sluice gates to lower water levels would severely impede the ability of the CFD's Air Sea Rescue Division to respond to an emergency in Chicago's central business district. Bridge openings take eight to ten minutes from the moment the roadway gates lower to the moment water vessels are clear to cross underneath.

11. The City is concerned with Michigan's proposed limitations on the operations of the sluice gates at the O'Brien Lock and Dam, the Chicago Controlling Works, and the Wilmette Pumping Station. (Motion for Prelim. Injunction 28, ¶ (b).) Michigan proposes that the Defendants be enjoined to maintain Chicago area waterways at the "lowest level possible" and to keep the sluice gates closed except to protect against "serious threats to public health and safety" and to "prevent significant flooding that threatens public health or safety." Upon information and belief, the Metropolitan Water Reclamation District (the "District") currently uses the sluice gates to divert water from Lake Michigan into Chicago's inland waterways as necessary to maintain water quality in those waterways, which diversions would be prohibited under Michigan's proposed injunction. By severely limiting the circumstances under which the District could make water quality diversions from Lake Michigan, Michigan's proposed injunction would very likely degrade overall water quality in Chicago's inland waterways, including the Chicago River, the Chicago Sanitary and Ship Canal, and the North Shore Channel. Thousands of Chicago households and businesses are adjacent to Chicago's inland waterways. In addition, the City and Chicago Park District have invested approximately 100 million dollars in the past ten years on infrastructural improvements along the Chicago River, largely to improve and encourage public access. Lastly, due to significant improvements in water quality in Chicago's inland waterways over the past several decades, these waterways now support an

abundance of native wildlife, including migratory and endangered birds, native fishes, turtles, beaver, and other aquatic life. Although the City supports the eventual phase-out of Lake Michigan diversions as a tool to maintain water quality in Chicago's inland waterways, Michigan's proposed injunction would not allow for such alternate means to be developed or implemented and would be to the immediate detriment of homeowners and businesses adjoining Chicago's inland waterways, recreational users of those waterways, and wildlife that depend upon those waterways for their food, habitat, and/or water needs.

12. According to information provided by the City's Department of Water Management, if the District is enjoined from opening the sluice gates at the O'Brien Lock and Dam, the Chicago Controlling Works, and the Wilmette Pumping Station during significant precipitation events, this could have substantial negative impacts on the City's sewer system and other City infrastructure, as well as promoting surface flooding conditions. In addition, these negative impacts could be exacerbated if the Army Corps is not allowed to operate the locks at the O'Brien Lock and Dam and the Chicago Controlling Works to assist the District in maintaining water levels during significant precipitation events. (Motion for Prelim. Injunction 28, ¶ (a).) Draining the City-maintained sewer system becomes increasingly difficult as river elevations rise, potentially resulting in larger areas of the City experiencing water in basements and for longer time periods. Low points along the river such as Lower Wacker Drive could become inundated with overbank

flooding, adversely impacting traffic and other utilities. Excessive flooding elevations could also impact the bank stability along Chicago's inland waterways, saturating the earthen banks, raising the risk of sloughing, erosion and sedimentation. Surface ponding could occur from either overbank flooding or from surcharged sewers not being able to convey flows from street catch basins.

13. Unless otherwise indicated, the matters asserted in this affidavit are based on my personal knowledge. If called upon as a witness, I can testify competently to the contents of this affidavit.

SUZANNE MALEC-MCKENNA
Commissioner
City of Chicago
Department of Environment

Signed and sworn to before me
this 4th day of January, 2010.

NOTARY PUBLIC

Official Seal
Hollis Stewart
Notary Public State of Illinois
My Commission Expires 10/02/2013

In The

Supreme Court of the United States

October Term 1966

STATES OF WISCONSIN, MINNESOTA,
OHIO, AND PENNSYLVANIA,
Complainants,

v.

STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO,
Defendants,

UNITED STATES OF AMERICA,
Intervenor.

No. 1
Original

STATE OF MICHIGAN
Complainant,

v.

STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO,
Defendants,

UNITED STATES OF AMERICA,
Intervenor.

No. 2
Original

STATE OF NEW YORK,
Complainant,

v.

STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO,
Defendants,

UNITED STATES OF AMERICA,
Intervenor.

No. 3
Original

AFFIDAVIT OF LYNN M. MUENCH OF THE AMERICAN WATERWAYS OPERATORS

Lynn M. Muench, being duly sworn, states as follows:

1. I am competent to make this affidavit, and I have personal knowledge of the matters set forth herein.

2. I am the Senior Vice President of Regional Advocacy for The American Waterways Operators ("AWO"), the national trade association for the inland and coastal tugboat, towboat, and barge industry in the United States. AWO comprises more than 300 individual companies, both carriers (the operators of towing vessels) and affiliated businesses. Its mission is to promote the long term economic soundness of the industry, and to enhance the industry's ability to provide safe, efficient, and environmentally responsible transportation, through advocacy, public information, and the establishment of safety standards. Further information about AWO can found at http://www.americanwaterways.com/index.html.

3. I have worked for AWO in this capacity since 2001. Before that time, I was the Vice President of the Midwest Area River Coalition 2000, in which position I worked extensively on the infrastructure needs of the Upper Mississippi River Basin. Previously, I spent over 18 years working as an agricultural consultant in product development and pesticide/water management in the southeastern and midwestern United States.

4. I have a B.S. degree in Agronomy and Adult Education from the University of Wisconsin at Madison and have completed class work for a M.S. degree in Management at the University of South Florida at Fort Myers.

5. My professional responsibilities at AWO include managing key inland river and Great Lakes issues, interfacing with state regulatory and legislative personnel and the media, and

working with the U.S. Coast Guard, U.S. Army Corps of Engineers, and other federal agencies. I am the primary advocate representing AWO on industry issues in the Midwest and Ohio Valley regions in both state legislatures and federal agencies.

6. I have reviewed publicly available information concerning commercial navigation, the Chicago Waterway System and the threat of infestation by bighead and silver carp, including information published by the U.S. Army Corps of Engineers, the Texas Transportation Institute, and the National Waterways Foundation. I have also solicited and reviewed detailed information provided by some of AWO's members and their customers regarding their use of the Chicago Waterway System and the potential impact of lock closures on their businesses.

7. I have reviewed the papers filed by the State of Michigan in the Supreme Court of the United States on December 21, 2009, in its action to compel the State of Illinois and the Metropolitan Sanitary District to take measures to abate the potential spread of two species of Asian Carp, the bighead and silver carp, into the Great Lakes. I am aware that Michigan seeks relief including a preliminary injunction requiring the immediate closure of the O'Brien lock and the lock at the Chicago Controlling Works, and limiting the operation of the sluice gates and restricting water levels at the O'Brien Lock and Dam, the Chicago Controlling Works, and the Wilmette Pumping Station.

8. Based on my knowledge of the tugboat, towboat, and barge industry and the role of the Chicago Waterway System in commercial navigation, I have determined that taking the abatement measures requested by Michigan in its motion for emergency injunctive relief would be catastrophic for the tugboat, towboat, and barge industry in the Great Lakes-Midwest region and the customers who depend on it, and would have a disastrous impact on the economy, the

environment, and public safety in the region. The following paragraphs of this affidavit set forth more fully the background and bases for these conclusions.

9. The Chicago Waterway System is made up of the Illinois Waterway, the Chicago River, the Chicago Sanitary and Ship Canal, the Calumet River, and the Calumet-Sag Channel ("Cal-Sag Channel"). The system contains three locks that allow for navigation: the Lockport Powerhouse and Lock "(Lockport Lock"), the O'Brien Lock and Dam ("O'Brien Lock"), and the lock at the Chicago River Controlling Works ("Chicago Lock"). All these locks are operated by the U.S. Army Corps of Engineers. Sluice gates (large plates that slide into grooves in the sides of a channel used to control water levels and flow rates) are located at the O'Brien Lock and Dam, the Chicago River Controlling Works, and the Wilmette Pumping Station. The O'Brien Lock and the Chicago Lock directly connect the Chicago Waterway System to Lake Michigan. Direct connections to Lake Michigan also exist at the Wilmette Pumping Station and from the Grand Calumet and Little Calumet Rivers.

10. In 2008, 19,388,631 tons of commodities moved through the O'Brien, Chicago, and Lockport[1] locks combined.[2]

11. The O'Brien Lock is located on the Calumet River and regulates the flow of Lake Michigan waters down the Calumet-Sag Channel. An average of more than 20,000 vessels (not limited to towing vessels) per year traversed the lock from 2004 to 2008 (inclusive). In 2007,

[1] Michigan does not appear to seek immediate closure of the Lockport Lock. However, maintaining the waterways around the O'Brien Lock, the Chicago Lock, and the Wilmette Pumping Station at the "lowest level possible," without regard to maintaining levels suitable for navigation (as Michigan has requested) would effectively preclude use of the Lockport Lock and the Chicago Sanitary and Ship Canal for navigation.

[2] The figures in this and the following two paragraphs are maintained by the Army Corps of Engineers' Navigation Data Center, and are available at http://www.ndc.iwr.usace.army.mil/lpms/lpms.htm.

7,294,890 tons of cargo came through the O'Brien Lock. In 2008, the total cargo through O'Brien Lock was 6,822,254 tons.

12. The Chicago Lock is on Lake Michigan, at the mouth of the Chicago River. An average of more than 38,000 vessels per year (not limited to towing vessels) traversed the lock from 2004 to 2008 (inclusive). In 2007, 167,800 tons of cargo were moved by barge through the Chicago Lock. In 2008, 105,484 tons of cargo came through that lock.

13. The Lockport Lock is located within the three-mile lower reach of the Chicago Sanitary and Ship Canal, which extends from the Chicago River to the Illinois Waterway. An average of nearly 4,000 vessels per year (not limited to towing vessels) traversed the lock from 2004 to 2008 (inclusive). In 2008, 12,460,893 tons of cargo were moved through the lock. 13,501,517 tons of cargo went through in 2007.

14. In 2007, 16.9 million tons of waterborne commodities moved through the Chicago Sanitary and Ship Canal alone. This included over 3.7 million tons of petroleum products destined for refineries, airports, and other facilities. Another 6.2 million tons of cargo traversed the Cal-Sag Channel that year.

15. In addition to petroleum products, the commodities transported by barges through the Chicago Waterway System include, among other things, agricultural products, coal for regional power plants, road salt, steel, cement, and countless raw materials for processing or manufacturing. The supply of products that are critically important to the Great Lakes-Midwest region during the winter months, such as road salt, home heating oil, and aircraft-deicing fluid, depends heavily on the towing industry.

16. Transport by barge and towing vessel is the most cost-effective and environmentally friendly way to move these materials, and in many cases is the only mode that can reach customers beyond the Chicago and O'Brien locks.[3]

17. Overwhelmingly, the towing and barge operators are paid by the quantity of transported cargo: by weight for dry goods and by the barrel for liquid cargo. Towing companies that conduct only short trips for fleeting or shifting are paid by the hour or by the trip, depending on the contract.

18. Dozens of barge and towing operators, ranging from small, family-owned operations to major national transportation companies, routinely use the Chicago and O'Brien Locks. At least 17 AWO member-operators would be directly impacted by the closure of the locks, in addition to at least six non-AWO towing companies.

19. The barge and towing operators that move cargo, the shipyards that service the towing industry, and terminals that receive, ship, and store cargo, would suffer massive loss of business as a result of the lock closures and other measures requested by Michigan. Taking into account the effect these measures would have on navigation through the Lockport Lock as well, the outlook for the regional towing industry and its customers is all the more bleak. (As explained above, Michigan currently does not request the closure of the Lockport Lock, but its requested

[3] Entities that are "beyond" or "above" the locks are on the Great Lakes side, so that, to reach them, commercial towing vessels would need to transit through a lock from the river system to the Great Lakes. The Chicago lock provides immediate access to Lake Michigan. The O'Brien lock, on the Calumet River, is several miles away from Lake Michigan, but Great Lakes Waters begin immediately on the lake side of O'Brien Lock.

restrictions on water levels in nearby waterways would all but cut off navigation through that lock and the Chicago Sanitary and Ship Canal.) For example:

- Canal Barge Company is a marine transportation company that also owns the Canal Terminal Company, a bulk liquid storage facility, and Illinois Marine Towing, a Chicagoland towing and fleeting company. Canal Barge alone moves hundred of millions of dollars in liquid cargo through Chicago annually. Its revenue from these shipments would evaporate if the locks were closed. Illinois Marine Towing, which overwhelmingly operates above the Chicago Waterway locks that Michigan seeks to shut, would be at risk of going out of business during a prolonged closure of the locks.

- American Commercial Lines, a major national marine transportation and manufacturing company, this year alone transported over 125,000 tons of cargo above the Chicago Lock valued at $33 million, and over 1.1 million tons of cargo valued at $268 million above the O'Brien Lock. This business would be lost in the event of lock closures.

- In 2009, Ingram Marine Group transported over 600,000 tons of cargo outbound from or inbound to points above O'Brien Lock, including large volumes of iron, coke, steel, scrap metal, and other cargos. Ingram estimates the total dollar value of these cargos at over $80 million, with associated revenue exceeding an estimated $10 million. In addition, in 2009 Ingram transported over 900,000 tons of cargo—with an estimated total value of over $100 million—outbound from or inbound to points above Lockport Lock.

- Chicago Dry Dock, Inc., a shipyard located on the Calumet River on the Lake Michigan side of O'Brian Lock, would be entirely cut off from inland river system if the O'Brien and Chicago locks were closed. Chicago Dry Dock, Inc., reports that the closures would

put it out of business and all 20 people in its organization would lose their jobs. The customers who depend on Chicago Dry Dock for the repair of inland river barges and towboats, repair of Great Lakes tugs and barges, and repair of passenger vessels operating in downtown Chicago, would be similarly devastated.

- At least two AWO operators, Kindra Lake Towing LP and Calumet River Fleeting, Inc., that are based beyond the O'Brien Lock would likely cease to exist if the lock were to be closed for more than several days.

- An AWO-member terminal on the Cal-Sag Channel, above the O'Brien Lock, predicts that its property value would drop dramatically and it would be put out of business if the Cal-Sag Channel were to be closed.

- Brennan, an environmental remediation and marine construction business, currently has more than $15 million invested in equipment for projects in the Great Lakes basin that require use of the Chicago canals. It also is investing $12.5 million in new barges and boats specifically designed for navigation on the Great Lakes. Closure of the locks and restriction of access to the canals would make these investments virtually worthless. Brennan anticipates a loss of market position and lost jobs as a result of such measures.

- The International Liquid Terminals Association, a trade association of commercial operators of bulk liquid terminals, reports that its members operate at least 10 facilities on the Chicago Waterway System. Collectively, they have 378 liquid storage tanks with a volume of more than 167 million gallons; the annual throughput is several times that

quantity. Without ready access to the rivers, these facilities will not be able to receive or deliver materials to and from their customers, which include oil producers, chemical and product manufacturers, food growers and producers, utilities, commodities brokers, transportation companies, and the military.

- The American River Transportation Company's Lemont, Illinois facility—which delivers road salt, ethanol, fertilizer, steel, and coal through the locks—estimates losses of at least $2.5 million in revenue annually (much more during a non-recession year, when more cargo is shipped) resulting solely from disruptions to the O'Brien and Chicago locks. It estimates revenue losses of approximately $16 million when disruptions to the Lockport Lock are also taken into account.

- Blessey Marine Services Inc. has contracts for, and is currently building, $20 million worth of equipment specifically to transit O'Brien Lock. Those vessels would have to be retrofitted at a large cost to operate elsewhere if O'Brien Lock were shut down. Blessey currently has five tows that operate in the affected area. If the locks were to be shut down, it would face an estimated $18M in lost revenue and possibly 50 lost jobs.

20. At any given time, there are hundreds of towing vessels operating or fleeted beyond the O'Brien Lock. In the event of a lock closing, these vessels would be stranded, and their operators would be unable to reposition the equipment in a timely manner. For example:

- American Commercial Lines reports that it operates 60 to 100 barges in the Chicago area on a typical day, making deliveries to at least 25 different facilities above the O'Brien Lock.

- Ingram Marine Group reports in any given week, it has as many as 40 barges located above O'Brien Lock.

- It would take the industry a minimum of 30 days, and up to 60 days during ice season, to reposition the barges that are beyond the O'Brien and Chicago locks.

- The lost opportunity cost for a tow is between $5,000 and $15,000 per day. The cost to replace a barge ranges from $500,000 to over $2 million.

- For comparative purposes, when the Chicago Sanitary and Ship Canal was temporarily closed in August 2009, at least 16 tugboats and 159 barges were trapped in a single day.

21. Information obtained from many AWO members in the towing and barge industry indicates that the lock closure and water-level manipulation measures requested by Michigan would result in significant job losses, in the hundreds and perhaps thousands. For example:

- American Commercial Lines, reports that its terminal at Lemont, Illinois (25 miles southwest of Chicago) currently supports about 102 employees. The closure of the locks would severely impair the facility's business and future operation.

- Canal Barge and its affiliates employ about 150 workers in Chicagoland. Nearly 130 of those jobs could not be supported if the locks were closed and the barges ceased to operate above Lockport Lock.

- American River Transportation Company estimates that a dozen jobs at its Lemont facility could be affected by the O'Brien and Chicago lock closures alone. An estimated 100 jobs could be imperiled if the Lockport Lock is taken into account as well.

22. In addition, closing the locks would have a devastating economic impact on the towing industry's customers—businesses that rely on commercial navigation for the delivery of raw materials and for a market outlet for their goods. Without fuel and raw materials, manufacturers, refiners, processing plants, and other businesses cannot maintain their outputs. They will have to decrease production or even close their doors. Terminals and terminalling facilities could cease to operate. The lost revenues would imperil the jobs of countless workers. Various businesses have reported to AWO the predicted effects of lock closures:

- Large businesses, including manufacturers, oil refineries, and agricultural companies in the area, report that the lock closure would result in an immediate loss of business totaling tens of millions of dollars, potentially dozens of job losses, and reduced tax revenue. One such oil refinery relies on barge operations to move $15-20 million worth of goods on the Des Plaines River through the locks. One manufacturer of petrochemicals and refining products predicts that the lock closures would result in an immediate loss of business, the idling of its manufacturing output, and the accompanying economic impact of job losses and reduced tax revenue. An oil re-refiner reports that lock closures would interfere with plans to increase its capacity over the next five years by using barge transportation to increase its used oil collections from remote areas. The facility already depends on barge traffic for receiving used oil and shipping products; it had nearly $5 million in cargo moved through the affected locks in 2009.

- Apex Oil owns a petroleum terminal in Forestview, Illinois, and would be negatively affected by the closure of O'Brien Lock and corresponding disruption of the Lockport Lock. The cargo that travels through O'Brien Lock is worth approximately $13.5 million per year, and the amount traveling through Lockport Lock is worth over $74 million per

year. The various investments and contracts made by Apex in its assumption that O'Brien and Lockport Locks would be functional would be detrimentally affected by any closure of the locks.

- IMTT-Illinois, a third-party terminalling facility, reports that the abatement measures proposed by Michigan would result in an immediate loss of 93 local jobs.

- Ozinga Ready Mix Concrete Inc., a large ready mix concrete company, owns four terminal locations that would be negatively affected by the closure of the O'Brien Lock and disruption of water levels. This year alone Ozinga shipped over 100,000 tons of cargo through the O'Brien Lock, and over 1.6 million tons of cargo through the Lockport Lock area. The terminal investments made by Ozinga would be detrimentally affected by any lock closure or water-level manipulation.

- Chicago Port Railroad Company owns a cargo terminal in the Lake Calumet region in Chicago that would be negatively affected by the closure of the O'Brien Lock and disruption of navigation through the Lockport Lock. This year alone Chicago Port Railroad shipped over 100,000 tons of cargo through the O'Brien Lock. The terminal investment made by Chicago Port Railroad would be detrimentally affected by any closure or water-level manipulation of the locks.

- ELG Metals, Inc. reports that it depends on barge transportation to ship cargos such as stainless steel scrap to mills. Closure of the O'Brien lock would shut off its route to the Illinois River. Currently ELG estimates that it ships $20 million in cargo through the Chicago-area locks annually.

- A large liquid asphalt storage terminal north of the O'Brien Lock on the Cal-Sag Channel is solely supplied by marine vessels. Closure of the locks will reduce the current value and future profitability of the terminal, affect the local market, and increase the transportation costs for it and similarly located businesses.

- Beemsterboer Slag Corp., a terminalling business that moves cargo from barges to other vessels, reports that its business would be shut down, causing the loss of 15 union jobs. Closure of the locks would effectively void all of its contracts.

- Rowell Chemical Corporation reports that because it receives its caustic soda supplies by barge through Lockport Lock, it would be detrimentally impacted by the lock closures and water-level manipulation sought by Michigan, and could see 10 jobs lost.

23. There is no alternative commercial navigation route by which the cargo that currently passes through the Chicago Waterway System could be shipped. In particular, there is no waterway alternative to using the Chicago and O'Brien locks to reach customers above the locks.

24. Alternate modes of transportation, such as highway and railway transport, cannot make up for the halt in commercial navigation that closing the locks would cause.

25. First, there would not be sufficient availability of trains and trucks to accommodate the amount of freight (see ¶ 10) that travels through the Chicago Waterway System. A typical inland barge has a dry-cargo capacity at least 16 times greater than a single rail car, and 70 times greater than a single semi-trailer truck. A single barge can carry an amount of liquid cargo that would fill 144 semi-trailer trucks or 46 rail cars. For example:

- Moving a heated petroleum product, such as asphalt, from New Orleans to the Chicago area by barge would cost approximately $0.17 per gallon. A single barge would carry 52,000 barrels, or 2.184 million gallons.

- In comparison, a single rail car could carry about 23,000 gallons, at a cost of $ 0.30 per gallon. And unlike barges, rail cars must be scheduled several months in advance, and when available, require multi-year lease commitments to each car.

- Trucks would be even less efficient. One semi-trailer truck could carry about 5,600 gallons, at a cost of $0.60 per gallon—more than three times the cost per gallon of barge transit.

26. Second, many plants, factories, and other businesses receive cargo exclusively or primarily through commercial navigation. These businesses include power plants, petroleum plants, steel producers, and shippers of agricultural products. They do not have the physical infrastructure necessary to receive or distribute large quantities of goods by rail or by truck and therefore would be left indefinitely without fuel and raw materials and without a means of accessing the market with their products.

- For example, IMTT-Illinois' third-party terminalling facility at Lemont, on the Illinois Waterway, which links the Great Lakes with the Mississippi River system, has 148 bulk liquid storage tanks with a combined capacity of 42 million gallons, three warehouses, and a blending and packaging operation. The facility handles and stores a wide range of petroleum, chemical, pharmaceutical, and other products. The facility also manufacturers antifreeze and aircraft deicing fluid, and is a major storage and distribution system for

asphalt in the Great Lakes-Midwest region. 75% of the materials delivered to the facility are carried by barges.

- One manufacturer of petrochemicals and refining products ships approximately 75% of its products distributed in the Great Lakes area with bulk liquid barges. Among these products are the raw materials used in the manufacture of aircraft deicing fluid.

- American Commercial Lines, reported that at least 41 customers depend exclusively or predominantly on barge shipments to operate.

- ELG Metals reports that it ships huge quantities of scrap metal to a mill on the Ohio River that demands delivery by barge from Chicago.

- Canal Barge transports more than $52 million in cargo for a single barge customer that, because of its location, can be serviced by water only by using the affected locks.

- PPG Industries, Inc., a global supplier of paints, coatings, optical products, specialty materials, chemicals, glass and fiberglass, would be severely impacted by the effects of the actions requested by Michigan on Lockport Lock because its product replenishment barges must travel through that lock to arrive at PPG's terminal in Lemont, Illinois.

- Apex Oil ships and receives cargo, such as liquid asphalt, roofing asphalt, petroleum feedstock, carbon black feedstock and diesel fuel, exclusively by barge.

- Marine Material Handling Corporation reported that its four largest customers depend solely on barge shipments.

- On the Calumet River alone, there are 27 businesses above the O'Brien Lock that primarily rely on their docks to receive or ship vital materials by barge.

27. Third, transferring cargo from barges to trucks or rail cars before they enter the Chicago Waterway System would require a massive facility for the unloading and reloading of the cargo. Such a facility does not exist and cannot be constructed in the short term.

28. Even if some portion of the cargo presently carried through the Chicago Waterway System could be transported by truck or by rail, the impact of such alternatives would be disastrous for the region.

29. First, the costs of transportation would skyrocket because waterway transport is the most economically efficient mode of commercial freight transportation. These costs would be borne by the ultimate consumer.

- For example, Hanson Material Services, an aggregate materials supplier, invested $3.5 million dollars in a new floating sand plant in Morris, Illinois, in 2005, on the assumption that it could mine the site continuously for 20 or more years and barge the materials into Romeoville, Illinois using the Chicago Sanitary and Ship Canal. Hanson reports that trucking the distance, or transferring from barge to truck mid-route, would be cost prohibitive, and the product would no longer be economically justified.

- ELG Metals reports that, if it were forced to use alternative modes for shipping its freight, its transportation costs would double if it used trucks, and would increase by 1.5 times if it used the railroads. It could no longer ship scrap metal at the lowest cost per ton.

- CCI Manufacturing, which supplies anti-freeze, brake fluid, and windshield wiper fluid to automotive assembly plants, receives barge shipments valued at $1-1.6 million each month, at its Lemont, Illinois, facility. CCI relies on the transportation efficiency of commercial navigation in order to supply its customers.

- A producer of calcium chloride products reports that attempting to convert to other modes of transportation in the short term would result in an additional $3 million in costs to the customers in the Chicago market annually. Calcium chloride is used to control snow and ice on sidewalks, parking lots, and roads and is critically important to the functioning of the entire Chicagoland region during the winter months.

- PPG Industries, Inc. reports that its customers that depend on its operations in Lemont would be negatively impacted by any interruption in barge traffic through Lockport because it is not economical or practical for PPG to move its products via truck or rail.

30. Second, moving freight from the Chicago Waterway System onto rail cars and trucks would have a significant adverse impact on the environment. Waterway transport is the most environmentally friendly mode of freight transportation. The fuel efficiency of a barge averages 576 ton-miles per gallon, compared to 413 and 155 for rail cars and trucks, respectively. Moreover, the tugboat, towboat, and barge operators pay a $0.20 per gallon fuel tax (the revenue from which is dedicated to the Inland Waterway Users Trust Fund).

31. Substituting rail cars or trucks would exponentially increase the emissions of hydrocarbon, carbon monoxide, nitrogen oxides, and particulate matter in the region, with

hazardous effects on environmental quality and public health. The following chart[4] summarizes the relative emissions of these pollutants.

Emissions (grams/ton-mile)				
	HC	CO	NOx	PM
Inland Towing	0.01737	0.04621	0.46907	0.01164
Eastern Railroad	0.02419	0.06434	0.65312	0.01624
Western Railroad	0.02423	0.06445	0.65423	0.01621
Truck	0.020	0.136	0.732	0.018

32. Third, substituting rail or truck transportation for commercial navigation would create untenable traffic congestion on the roads and rails given the enormous disparity in the capacity of barges compared to trucks and rail cars. By way of example, the Texas Transportation Institute found that it would take roughly 58,000,000 truck trips annually—or 1160 trucks per day per lane on a typical highway—to carry the amount of cargo that flows through the Mississippi, Ohio, Tennessee, Columbia, and Snake rivers and the Gulf Intracoastal Waterway. Such increased road usage in the already-congested Midwest-Great Lakes region could cripple traffic in the region and greatly reduce the surface life of the affected roadways.

33. Fourth, public safety would greatly suffer as a result of increased truck and rail traffic. Nationwide, for each fatality attributable to waterway transport, there are 155 and 22.7 highway and rail fatalities, respectively. For injuries, the ratios are 1 to 2171.5 and 1 to 125.2, respectively. The lock closures, and the attendant increase in other modes of transportation, certainly would increase the number of traffic fatalities and injuries.

[4] Source: Texas Transportation Institute, Center for Ports and Waterways. A Modal Comparison of Domestic Freight Transportation Effects on the General Public. Executive Summary (November 2007). The full study is available at: http://tti.tamu.edu/documents/TTI-2007-5.pdf; and the executive summary may be found at: http://tti.tamu.edu/documents/TTI-2007-4.pdf.

34. Finally, it must be noted that lock closures would not stop the migration of Asian carp into the Great Lakes. There are several other connections between the Illinois Waterway and Lake Michigan that do not have locks. At the locks, carp could travel over sluice gates and ultimately enter the lake, especially during flooding. (And Michigan appears to acknowledge that the gates must be opened at least occasionally to prevent flooding.) Thus, the requested injunction would have ruinous effects on the barge and towing industry, regional businesses, employment, the environment, public health, and traffic safety, with no assurance of halting the spread of Asian carp into the Great Lakes.

35. I have reviewed the preceding thirty-four (34) paragraphs of this affidavit, and if called upon to testify as a witness in this matter, would testify as set forth herein.

Subscribed and sworn to before me
this 4th day of January, 2010.

Lynn M. Muench

Barbara Bassett

OFFICIAL SEAL
BARBARA BASSETT
Notary Public - State of Illinois
My Commission Expires Mar 15, 2013

In The

Supreme Court of the United States

October Term 1966

STATES OF WISCONSIN, MINNESOTA, OHIO, AND PENNSYLVANIA, *Complainants*, v. STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*, UNITED STATES OF AMERICA, *Intervenor*.	No. 1 Original
STATE OF MICHIGAN, *Complainant*, v. STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*, UNITED STATES OF AMERICA, *Intervenor*.	No. 2 Original
STATE OF NEW YORK, *Complainant*, v. STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, *Defendants*. UNITED STATES OF AMERICA, *Intervenor*.	No. 3 Original

AFFIDAVIT OF JAMES P. FARRELL

I, James P. Farrell, being duly sworn, state that the following facts are based upon my personal knowledge and are true and correct:

Background

1. My name is James Farrell. I am 53 years old and currently work for the Illinois Chamber of Commerce, located at 300 South Wacker Drive, Suite 1600, Chicago, Illinois 60606. I received my bachelor's degree from Franklin and Marshall College in Lancaster, Pennsylvania in 1977.

2. Since November 2007, I have been Executive Director of the Infrastructure Council for the Illinois Chamber of Commerce. The purpose of the Infrastructure Council is to bring business, labor, and government agencies together with policymakers to promote infrastructure improvements in Illinois and the region. Our goal is to ensure that the region has the necessary infrastructure in place that will allow Illinois and regional businesses to compete and thrive in today's global economy. Our efforts are especially heightened now given the sluggish state of the national economy, and in particular, the Illinois economy.

3. In my position as Executive Director, I work directly with the commercial navigation industry, railroads, mass transit agencies, the aviation industry, and engineers involved in the construction of roads and bridges. In addition, I work alongside trade unions and government agencies, such as the Illinois Department of Transportation, the Chicago Department of Transportation, the Illinois Tollway Authority, the Chicago Metropolitan Agency for Planning, and the Regional Transportation Authority.

4. Prior to my position as Executive Director of the Infrastructure Council, I was employed as an Illinois Chamber of Commerce staff member from 2002-2005. As a staff member, I regularly communicated with, and advocated for, members of the Chamber whose businesses were dependent on the region's infrastructure.

5. Prior to joining the Illinois Chamber of Commerce, I was the Founder and Principal of New Business Development (NBD). While at NBD, I worked with a variety of industries, including marine hardware, web development, natural foods, and investment banking. Before NBD, I was the principal of the James P. Farrell Company (JPFCO). JPFCO represented manufacturing and distribution firms in the building material industry.

6. Throughout my career I have been concerned with freight issues as a cost of doing business, and particularly since 2007, my work has consistently focused on improving infrastructure and public systems that are essential to Illinois businesses. Such systems include railroads, waterways, roads and bridges, and airports. In this capacity, I have become very familiar with the effect that Illinois waterways—including the Chicago Area Waterways, commonly known as the Chicago River and adjoining canal system—have on businesses in Illinois and the Great Lakes Region, and which are part of the national and global economy.

7. I have reviewed the documents filed by the State of Michigan in the Supreme Court of the United States. I understand that Michigan seeks to force the State of Illinois, the Metropolitan Water Reclamation District of Greater Chicago, and the U.S. Army Corps of Engineers to immediately take steps designed to prevent the spread of an invasive species of Asian Carp into Lake Michigan. Specifically, Michigan seeks the closure of the O'Brien Lock and the navigational lock located at Chicago Controlling Works ("Chicago Lock"). In addition,

Michigan requests that the Supreme Court order the defendants to improve the operation of the sluice gates at O'Brien, Chicago Controlling Works, and the Wilmette Pumping station so as to prevent the spread of Asian Carp into Lake Michigan. Finally, Michigan requests that the Supreme Court order any other measures that might be necessary to prevent the potential spread of the Asian Carp into Lake Michigan.

8. I have also reviewed public information regarding the role of the Chicago waterway system in local, national, and international shipping. This includes information published by the Illinois Chamber of Commerce, the American Waterways Operators, the U.S. Army Corps of Engineers, and the American Association of State Highway and Transportation Officials. Further, I have discussed the impact of the possible closure of the O'Brien and Chicago Locks with regional business owners and operators, as well as representatives of the Illinois Tollway Authority. Finally, I have discussed Great Lakes' issues with Cameron Davis, Senior Advisor to the Administrator of the U.S. Environmental Protection Agency.

9. Based upon my knowledge of businesses in Illinois and the Great Lakes Region, and the vital role the Chicago waterway system plays in the everyday operations of these businesses, I believe even the temporary closure of the O'Brien and Chicago Locks will (1) devastate the local economy, and significantly, the role of the Illinois economy in the regional, national, and global economies, (2) endanger the safety of the region's citizens, and (3) cause environmental harm to the region.

Economic Harm

10. Much of Chicago's prosperity is directly related to its status as an international port city. After construction of the Illinois and Michigan Canal in 1848, Chicago and the Great Lakes

Region became connected to the world via the Des Plaines River, the Illinois River and the Mississippi River. In 1900, engineers completed the Chicago Sanitary and Ship Canal; enhancing Chicago's shipping capabilities and furthering its economic relationship with the outside world. The Chicago Sanitary and Ship Canal is the only waterway shipping link between the Great Lakes and the Mississippi River. The infrastructure provided by Chicago's canal system is largely responsible for creating the commerce that underlies Chicago's status as a vibrant and critical economy to the region and the nation.

11. Commercial navigation of the Illinois waterways provides essential commodities that touch the lives of the region's citizens in many ways. Shipping by barge along Chicago's waterways is the most economical, environmentally friendly, and safest manner for shipping such goods. More than $16 billion worth of goods are transported annually to, from, and through Illinois by river barge. An example of a barge's efficiency is that one river barge alone can carry nearly 60,000 bushels of wheat—enough to provide one loaf of bread to almost every resident in the city of Chicago.

12. The economic harm that will result from the closure of the O'Brien and the Chicago Locks is real and significant. From June 2008 through June 2009, 7,147 loaded barges entered or left the region. That is the equivalent of 571,760 truckloads of cargo. Parked end to end, those trucks would stretch from New York City to Los Angeles and back. The O'Brien Lock handled 3,830 loaded barges—or 53% of the regional volume—totaling 306,400 truckloads. It should be noted that this number represents a depressed market. The five-year average of regional barge traffic is equivalent to 708,400 truckloads. In addition, since this data is derived from the U.S. Army Corps of Engineers' lock commodity reports, this number does not reflect

the large amount of regional shuttle traffic that takes place strictly between the O'Brien and Lockport Locks on a daily basis.

13. If freight traffic is disrupted in the Chicago area, costs for businesses will rise, consumer prices will increase, and jobs will be lost. Coal for power plants, road salt, construction materials, petroleum products, chemicals, fertilizer, sand, and limestone are among the many products shipped to Chicago and Illinois on its waterway system. Likewise, billions of dollars worth of manufactured goods and agricultural products are shipped out by the river and exported to the world, providing a considerable source of local and national income.

14. Because shipping by rail or truck is significantly more expensive than shipping by barge, common sense dictates that even the temporary shut down of the O'Brien and Chicago Locks will result in higher prices for both businesses and consumers. (Cost of shipping analysis understands that a significant portion of shipping costs includes loading and unloading at the shipping origin and destination. Thus, many businesses will not use intermodal transport of goods, *i.e.*, shipping involving more than one mode of transport. Rather, businesses will ship solely by train, truck, or barge—not some type of combination.) The resulting higher costs for many cash-strapped businesses will lead to an inevitable loss in jobs at a time when the state and national economy can scarcely afford any additional damage to the job market. As described below, the economic impact of closing the locks will be felt far and wide.

15. The grain industry—including corn, beans, wheat, and oats—will be seriously affected. The Chicago Board of Trade—which sets prices for worldwide grain markets—uses two facilities that are dependent on grain being shipped through the O'Brien Lock. These two facilities represent the benchmark by which the Chicago Board of Trade prices the world's grain.

Any restriction on barge traffic through the O'Brien Lock will devastate the use of these two facilities, severely hampering the Chicago Board of Trade's ability to reliably price world grain.

16. In addition to the damage done to the complex pricing scheme of world grain, many farmers from Illinois, Wisconsin, Iowa, Missouri, Kentucky and as far away as North Dakota will be forced to find other means for shipping their grain.

17. There are other practical price increases in the grain industry that will result from the lock closures. Barges that carry inbound freight are often cleaned and repositioned to grain elevators located between Chicago and Peoria. These barges are then loaded with grain and shipped throughout the world. If the O'Brien Lock closure reduces the amount of barge traffic entering the region, these barges will not be available to be cleaned and repositioned to grain elevators between Chicago and Peoria. As a result, grain will have to be shipped on empty barges that are brought up from New Orleans. The difference in cost is tremendous. Repositioning a barge that has gone through the O'Brien Lock to a grain elevator located as far from Chicago as Peoria costs less than $3,000. In contrast, an empty barge that travels from New Orleans to Peoria costs approximately $30,000—a $27,000 price difference. Over 21,000 barges of Illinois corn leave the region for export to the world markets every year. Thus, the total exposure to the corn industry could be as high as $567 million per year (21,000 barges x $27,000). The percentage of exposure actually experienced in the corn industry would be determined by how accessible the region is to the importation of material on barges. The closure of the O'Brien Lock will obviously reduce the region's inbound freight, thereby damaging the cost structure of the country's agricultural exports.

18. The steel industry will also feel the effects of the lock closure. The O'Brien Lock gives northwest Indiana's steel industry access to the Inland Waterway System, the Gulf of Mexico, the Panama Canal, and the Asian markets beyond the Pacific Ocean. The steel industry uses the waterway system to receive raw material and to ship finished products and market byproducts. The steel industry accounts for much of the traffic through the O'Brien Lock. Closure of the O'Brien Lock will inevitably increase the costs of shipping steel, damaging the industry, and raising costs for consumers.

19. Energy prices for the region's residents will not be able to avoid the negative consequences of the potential lock closures. The majority of power plants in the region receive fuel that is shipped by barge. In times of strong market demand, much of this fuel is shipped through the O'Brien Lock. Receiving fuel by truck (Chicago's main power stations do not have rail access and depend on the river) rather than by barge will increase the costs for these power plants—an increase that will ultimately be passed on to Illinois residents in the form of higher energy costs.

20. Refineries in the region depend on petrochemical additives that are shipped by barge through the O'Brien Lock. Shipping by truck or rail will raise costs for these refineries. Again, the increased costs will be passed on to the consumer in the form of higher gasoline prices. Likewise, the increased shipping costs will mean that refineries will no longer find it economical to ship certain refinery byproducts, such as petroleum coke—a very cost effective fuel used by many communities in the region as fuel for power plants. Without the revenue from these byproducts to help offset refinery costs, the upward pressure on gasoline prices will be even greater.

21. Construction costs of all kinds will be affected by the closure of the O'Brien and Chicago Locks. Steel, concrete, and asphalt will have to be shipped by rail or truck—raising the cost of such materials. Thus, the costs of building essential structures such as bridges and roads, as well as schools, libraries, and fire stations will inevitably rise. Both businesses and local governments may delay or cancel new building projects if the rising price of construction materials becomes cost prohibitive.

22. Taxpayers will also feel the economic impact of closing the O'Brien and Chicago Locks, as the cost of maintaining Illinois roadways will inevitably increase. Conclusive studies conducted by the American Association of State Highway and Transportation Officials show that there is a direct link between pavement fatigue and vehicle weight. Large trucks cause pavement damage at a quicker and costlier rate than passenger vehicles. According to the National Cooperative Highway Research Program, trucks are responsible for 30%-50% of highway capital program costs. Thus, for every $1 billion spent on roadway infrastructure, $300-$500 million is used to remedy the damage caused by trucks. Studies conducted by the Illinois Tollway Authority indicate that one truck carrying a heavy load does 10,000 times more damage to the road than a passenger vehicle.

23. As mentioned, the five-year average of cargo shipped by barge in the region is equivalent to 708,400 trucks. Approximately 53% of these trucks are currently shipped by barge through the O'Brien Lock. Thus, closing the O'Brien Lock would likely force an average of over 375,000 additional trucks a year onto the region's roads and highways. This increase in the number of trucks will reduce the life expectancy of roadways and increase the amount of expenditures that will need to be allotted for the state's roads and bridges. (Over $9 billion has already been appropriated in 2010.) In addition, the increase in number of trucks will necessitate

additional construction and repairs to maintain the roadways. This increase in construction and repair will have the further effect of causing congestion and delays, raising the cost of doing business in Illinois. These increased costs will be borne by Illinois consumers and taxpayers.

24. Understandably, the Chicago waterway system is already heavily regulated due to the environmental impact of reversing the flow of the Chicago River. The region, however, must have the ability to manage the water level on a daily basis to prevent flooding—and not just in the case of an extreme event. The economic damage caused by the flooding of Chicago is clear and quantifiable. The Chicago Flood of 1992 reported estimated damage of $1.2 billion to property and an additional $36 million in legal costs to the city of Chicago. In today's dollars, a similar flooding would be considerably more costly. If Michigan succeeds in forcing the closure of navigational locks and gates, the likelihood of such a flood (and the corresponding dangers and costs) would increase dramatically. The costs associated with any flooding will be borne by the region's taxpayers.

25. Finally, I note that the State of Michigan seems to suggest in its documents submitted to the Supreme Court that under extreme circumstances, it may be necessary to open the river system's locks and gates on Lake Michigan to prevent massive flooding. Thus, the invasive species of carp would still be able to enter Lake Michigan. The result will be that the lock closures would devastate the region's economy and gain nothing in the process.

Safety Threat

26. In addition to the economic impact, an even temporary shut down of the locks would also threaten the safety of the region's citizens.

27. Illinois is the country's third largest consumer of road salt. If the O'Brien Lock is closed, road salt would become logistically price prohibitive for many cash-strapped municipalities, minimizing their ability to fund road maintenance and safety. While the City of Chicago receives its salt directly from Lake Michigan freighters (which are not dependent on the O'Brien Lock), the balance of the region receives its salt from terminals along the Sanitary and Ship Canal. Currently, the only landmass in the region that can accommodate the volumes of salt required for the safety of its citizens is between Lake Michigan and the O'Brien Lock. If the O'Brien Lock is closed now, as requested by the State of Michigan, many municipalities in northeastern Illinois will not have access to salt shipped through the Sanitary and Ship Canal.

28. In the winter of 2008, the salt industry experienced shortages causing price spikes in road salt. The price increases forced some municipalities such as Naperville—a large Western suburb of Chicago—to ration their use of road salt. The shortage was worsened by freezing waters that stranded salt barges. Because municipalities were unable to receive salt from barges due to the freezing waters, salt had to be lifted from barges in Peoria and then shipped by truck—drastically increasing the cost of road salt. If the O'Brien Lock is closed, the problems of the 2008 winter will be replicated to a slightly lesser degree in 2010 because many municipalities will be forced to receive their salt shipped by truck from stockpiles located on the other side of the O'Brien Lock.

29. The budget shortfalls currently facing many municipalities are well documented, particularly in Illinois. I believe that the closure of the O'Brien Lock will cause a spike in the price of salt. Because municipalities are already scrounging for funds to provide basic services for their residents, the increased price of salt will limit the ability of these local governments to

obtain an adequate amount of salt to keep the region's roads safe, resulting in greater risks to life and property.

30. No mode of transportation is more regulated or has a better safety record than the commercial navigation industry when shipping hazardous materials. If the O'Brien and Chicago Locks are closed, these hazardous materials, such as petro chemical and jet fuel, will be increasingly forced onto the region's roadways and railways.

31. Finally, the lock closures will increase traffic congestion, thereby reducing commuter safety. As an example, on a given work day in downtown Chicago, there are approximately one million commuter crossings over the bridges spanning the south branch of the Chicago River. Simultaneously, 80 truckloads of aggregate products frequently move by barge beneath them en route to cement plants on the north branch of the river. If those truckloads were forced onto Chicago's roads, there would be a large increase in local traffic congestion. While difficult to quantify, the increased traffic and congestion would add delays for commuters of many industries, further raising the costs of doing business in the Chicago area. More importantly, the increased traffic would likely reduce commuter safety in the region.

Environmental Harm

32. The damage done by the closure of the locks does not end with the region's economy and the safety of its citizens, but extends to the environment of the Great Lakes Region as well.

33. As mentioned, the steel industry accounts for much of the traffic through the O'Brien Lock. As part of its everyday operations, the regional steel industry removes recyclable metals and ships them by barge to markets worldwide. Without barge access, it will likely be

uneconomical for the steel industry to ship these recyclable materials. For example, the cost of shipping these materials by truck to Lemont, Illinois—an alternative of intermodal transit that is often suggested by proponents of the lock closure—is equivalent to the cost of shipping the same materials by barge all the way to New Orleans, Louisiana or Houston, Texas. From June 2008 to June 2009, 31,516 truckloads of recyclable metals left the region by barge to be reused. Closure of the locks would mean that instead of recycling these metals, the steel industry will be forced to discard them in the region's landfills. (It should also be noted that the steel industry's inability to recycle discarded metal will increase the region's supply of scrap metal. This increase in supply will depress the price of scrap metal—in turn reducing the amount of cash companies will receive from scrap metal, resulting in an overall rise to the cost of doing business.)

34. Closure of the locks will also increase carbon emissions. A river barge can move one ton of material 576 miles on one gallon of fuel while a truck can move that same ton of material only 155 miles. In addition, one towboat originating from the Gulf of Mexico pushes 15 barges (each carrying 80 truckloads of cargo) up the Mississippi and Illinois Rivers to the Chicago region. In other words, one towboat can move the same amount of cargo as 1,200 truckloads. The carbon footprint of two trucks equals the carbon footprint of one towboat. Thus, shipping by towboat effectively removes 1,198 trucks from the road. Such numbers make clear that the closure of the locks will inevitably increase the region's carbon emissions if materials are shipped by truck rather than by barge. (As mentioned, because of the costs associated with loading and unloading goods, many businesses will elect to ship solely by truck or barge—as opposed to shipping part-way up the Mississippi River by towboat and then unloading the materials onto trucks for the remainder of the trip to Chicago.)

Private and Public Cooperation

35. The cooperation of the U.S. Army Corps of Engineers, the U.S. Coast Guard, the Metropolitan Water Reclamation District of Greater Chicago, the Illinois Department of Natural Resources, and the commercial navigation industry has been exceptional in coordinating efforts to control the potential threat of Asian Carp entering Lake Michigan. The commercial navigation industry has cooperated fully as a partner with government agencies, including temporary shut downs for maintenance of the fish barrier and recent fish kills. The industry is committed to continuing this cooperation. The industry has asked for appropriate notification of shut downs and a reasonable duration of these shutdowns to accommodate their customers. Recent fish kills and harvest nettings prompted assurances from Cameron Davis, Senior Advisor to the Administrator of the U.S. Environmental Protection Agency, that no lock closures were required. Despite this assurance from the Environmental Protection Agency, Michigan still elected to sue. Because of its unfortunate decision to sue, the State of Michigan has brought this cooperation to a halt while all parties focus their attention on litigation—rather than solving the problem at hand.

36. I understand that Michigan is concerned about the potential impact to the Great Lake's $7 billion fishery. Michigan's position, however, ignores the certain damage that the lock closures will have on the more than $16 billion worth of goods transported annually to, from, and through Illinois by river barge—much of which are raw materials and component parts that are critical to generating revenue far beyond the base value of these goods. Similarly, Michigan ignores that the lock closures will cause significant harm to the region's safety and environment. Given these facts, I believe the scales are tipped heavily in favor of keeping the locks open and allowing the

region's commerce to proceed. Michigan's lawsuit provides no guarantee of gain, but absolute guarantee of loss on many levels to the region's businesses, consumers, and economy.

37. I have reviewed the assertions made in this affidavit and if called as a witness in this matter, I would testify as set forth herein.

James P. Farrell

Subscribed and sworn to before me
on January 4, 2010

Edna Hardy, Notary Public
Cook County, Illinois

OFFICIAL SEAL
EDNA HARDY
NOTARY PUBLIC STATE OF ILLINOIS
My Commission Expires 09/06/2013

IN THE SUPREME COURTOF THE UNITED STATES

STATE OF WISCONSIN, MINNESOTA, OHIO, AND PENNSYLVANIA *Complainants* v. STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO *Defendants* UNITED STATES OF AMERICA *Intervenor*	No. 1 Original
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STATE OF NEW YORK *Complainant* v. STATE OF ILLINOIS AND THE METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO *Defendants* UNITED STATES OF AMERICA *Intervenor*	No. 3 Original

AFFIDAVIT JOHN GROUNDWATER OF THE PASSENGER VESSEL ASSOCIATION

I.
Introduction to Affidavit

This Affidavit is submitted by the Executive Director of the National Association of Passenger Vessel Owners, Inc., a Maryland non-profit corporation, d/b/a the Passenger Vessel Association (herein, "PVA" or "Passenger Vessel Association") on behalf of its Chicago Area members operating businesses, passing through the Chicago River Lock over 8,000 times per year, and which, accordingly, would be greatly injured if foreclosed from passage through the Chicago River (the "River") Lock (the "Lock").

II.
Affidavit of John Groundwater,
Passenger Vessel Association Executive Director

I, John Groundwater, Executive Director of the Passenger Vessel Association, being duly sworn, do state the following as my affidavit:

A.
Introduction of PVA
and Multiple Chicago Area Passenger Vessel Excursion Companies
Dependent on Passage Through The Chicago Lock

1. I am competent to provide this Affidavit in my capacity as the Executive Director of the Passenger Vessel Association, 901 North Pitt Street, Suite 100, Alexandria, Virginia, 22314. I have been the Executive Director of the Passenger Vessel Association since 1994, and I am generally familiar with passenger vessel operators and their operations in Chicago.
2. This Affidavit is based upon my personal knowledge as well as information available to me in my capacity as Executive Director, expressly including statistical data provided to me since December 22, 2009, when I first learned of the Motion for

Preliminary Injunction. It is the best data available to me at this time, given the challenges of responding on an emergency basis between Christmas and New Years, vis-à-vis industry competitors that are privately held entities, generally maintaining non-disclosed financial and operational data.

3. The Passenger Vessel Association is the national trade association of owners and operators of United States flagged passenger vessels of all types. PVA's membership currently consists of approximately 550 vessel and associate members. Its members own and operate dinner cruise vessels, sightseeing and excursion vessels, passenger and vehicular ferries, private charter vessels, whale watching and eco-tour operators, windjammers, gaming vessels, amphibious vessels, water taxis, and overnight cruise ships.

4. Among PVA's membership are seven Chicago Area member passenger vessel operators. Each of these Chicago Area member companies (herein, collectively, "Chicago Vessel Companies") provides passenger excursions which enter and exit the Chicago River, via the Chicago River Lock. Each would be prevented from providing Lake-to-River and River-to-Lake excursions, upon which their business is dependent, should the Lock be closed. For these Chicago Vessel Companies, closure would be economically injurious, or completely crippling.

5. There are vessel excursion companies which are not members of the PVA, whose information is not available to PVA for this submission, however, if considered, would only demonstrate heightened excursion vessel use and need of the Chicago River Lock, than otherwise presented herein.

B.

The Importance Of The Locks To
Chicago Vessel Companies and Local Tourism

6. Passenger vessel excursions represent the single-most recognized activity for tourism and visitors in Chicago. An entire industry has developed with the focus of providing tourists and visitors with day-excursions between the Chicago River and Lake Michigan, through the Chicago River Lock. The Chicago Vessel Companies that will be affected by any lock closure have operated between the Lake and the Chicago River for decades.

7. The five Chicago Vessel Companies that were able to respond within the limited time period for providing this Affidavit, operate thirty-five passenger vessels that must pass through the Chicago River Lock. It is estimated that there are an additional 3 to 6 vessels, from Chicago Vessel Companies unable to respond by the required deadline.

8. The five Chicago Vessel Companies that were able to respond, operate passenger vessels with total United States Coast Guard passenger capacity of 4,115 passengers that must pass through the Chicago River Lock. It is estimated that there is an additional 400 to 700 passenger capacity, from Chicago Vessel Companies unable to respond by the required deadline.

9. The significance of the number of vessels (35 to 40 vessels), and vessel capacity (4500 to 5100 passengers), is that tens of millions of dollars of investment assets and resources are at risk if unable to be employed in their normal income-producing activity. The Chicago Vessel Companies generally maintain financing on vessels in

the seven-figure range, and are dependent upon River-to-Lake and Lake-to-River excursions for revenue to satisfy the debt service upon their vessels.

10. Vessels are docked both inside and outside of the Chicago River Lock. Specifically, North Pier, 400 North Michigan Avenue, 2 North Riverside Plaza, 222 South Riverside Plaza, The Ogilvie Transportation Center, the Reid-Murdoch Building, Michigan Avenue, Chinatown, Navy Pier, Ogden Slip, Michigan Ave Bridge, Burnham Harbor.

11. The five Chicago Vessel Companies that were able to respond, employ 604 employees as marine staff, support staff, sales staff and hospitality staff relating to passenger vessels that must pass through the Chicago River Lock. It is estimated that there are at least an additional 75 to 150 individuals employed by other Chicago Vessel Companies.

12. The four Chicago Vessel Companies that were able to respond, represent a total annual payroll, for FY 2009, of $7,033,396.00. This number certainly represents only a fraction of all payrolls of all Chicago Area excursion companies.

13. The significance of the employment maintained by the Chicago Vessel Companies, and the estimated payroll well-exceeding $7,033,396.00 paid to employees engaged in excursion vessel activity, is that closure of the Lock would place the income and economic security of hundreds of employees at risk if unable to be employed in their normal income-producing activity. The Chicago Vessel Companies each maintain high quality and well-paying employment that collectively sustain hundreds of Chicago wage earners.

14. Total Gross Revenue of the four responding vessel companies operating through the Chicago River Locks, is reported as $18,000,000. It can be reliably stated that total revenue for all Chicago Vessel Companies consolidated, would well exceed that reported for the four responding vessel operators.

15. The five responding Chicago Vessel Companies for this affidavit, passed through the Chicago River Lock 7,790 times in 2009. It is reliable to state that this is merely a fraction of passages by all Chicago Vessel Companies and vessel excursion operators who are not PVA members. Passages range, among Chicago Vessel Companies up to 35 passages daily.

16. The five Chicago Vessel Companies that were able to respond, carried 691,674 passengers through the Chicago River lock in 2009. It is estimated that in additionally at least a five-figure number of passengers were carried through the locks by other Chicago Area excursion operators.

17. Closure of the Chicago River Lock would prevent, by reference to 2009 sailing data, passage of an estimated 700,000 passengers per year, on approximately 8000 Lock excursion passages by Chicago Vessel Companies each year, and placing in economic jeopardy, the employment of approximately 700 Chicagoans.

18. The Chicago Vessel Companies are each operating in the upcoming third year of an extreme economic recession that has specifically and drastically impacted tourism and vessel ridership. Vessel functions have been negatively impacted in particular, as national trends indicate recession-caused reductions in vessel excursion business ranging from 15% to 45%, with Chicago being no exception to the national trend.

Whether totally foreclosing operation, or limiting operation, a River closure could not happen at a worse point in time for any operator seeking to recover from the current two-year tourism recession.

C.

The Excursion Booking Impact Of Any Action Now Upon Chicago Vessel Companies

19. The businesses of the Chicago Vessel Companies are extremely dependent upon advance bookings for vessel excursions, for functions such as convention functions, bus and tour groups, business entertainment, and private events.

20. Of the three Chicago Vessel Companies that were able to respond, between 200 and 300 excursions through the Chicago River Lock have already been booked for 2010. It is estimated that several hundred excursions may have already been booked in 2010 for the remaining Chicago Vessel Companies, involving passage through the Chicago River Locks. Assuming a conservative count of 100 passengers per booked function, closing of the Chicago River locks would immediately disrupt events currently under contract involving upward to 5,000 passenger vessel bookings, and revenue already under contract well in the six-figures, collectively for the Chicago Vessel Companies.

21. Most Chicago Vessel Companies actively sell and advertise for individual excursion bookings. It is believed that hundreds of tickets have already been sold for 2010 individual bookings.

22. Any closing of the Chicago River Locks, will immediately place in legal and economic uncertainty, the status of the hundreds of already booked excursions now

under contract between chartering entities and individuals, and the Chicago Vessel Companies.

23. The industry competes with land-based venues, and excursion alternatives in other cities for tourism and convention business. Event planners are extremely sensitive to any suggestion that any Chicago Vessel Company may not be able to provide the promised excursion for which a booking is made. It is believed, based upon tourism booking experience and process, that any uncertainty as to the ability of any Chicago Vessel Companies to operate, as might result from an injunction of any nature or duration, would have an immediate and irreparable impact upon the ability of the Chicago Vessel Companies to maintain current bookings, or to attract any new business, for 2010.

D.
Further Adverse Impacts Upon Tourism
And River Excursion Operations

24. The Chicago Vessel Companies will not only be directly and negatively impacted by inability to carry passengers to and from the Lake and the River, but also by many other conditions that will inevitably occur by closing down the lock system. Most notably, vessel excursion tourism will cease if stagnation occurs as the result of terminated River flow.

25. The Chicago River Lock is necessary for the passage of vessels to and from the River or Lake for purposes of mandated servicing, maintenance and repair.

26. The Chicago River Lock is necessary for the passage of emergency and rescue vessels to and from the River or Lake for purposes of emergency response, including fire and rescue services.

27. The Chicago River Lock is necessary to prevent the fouling of the River by stagnation. The passage of fresh water to and from the River is necessary in response to a variety of River conditions, including response to heavy rains and storm water run-off which will soon create a foul water condition if flow is not maintained.

28. The Chicago River Lock is necessary to prevent the foreclosure of intra-River traffic. Normally, high River conditions are readily relieved by opening the River locks. The clearance under Chicago area bridges is very low (17 feet) such that when River levels rise, and bridge clearance is reduced, as is frequently and regularly the case, all intra-River traffic will be required to cease for the many days that this River condition would exist, foreclosing even limited operation by emergency vessels.

29. The Chicago River Lock is necessary to allow River-docked vessels access to United States Coast Guard facilities for required inspections, or to allow United States Coast Guard emergency/security/rescue vessels into the Chicago River as necessary.

E.
The PVA Supports Ecological
Measures When Supported By Demonstrated Need.

30. The Passenger Vessel Association, while strongly supportive and recognizing the ecological interests from which many of our Great Lakes members derive their existence, believes that immediate closing the Lock as a preliminary step before a full adjudication, would have a clear, irreparable crippling economic impact upon

Chicago Vessel Companies, outside the context of any clear and well demonstrated immediate need to take this extreme action.

31. The PVA takes seriously any credibly-demonstrated harm that could ensue to the ecology of the Great Lakes should the Asian carp enter the lakes. PVA member companies across the country have worked through the PVA for its leadership in ecological preservation ranging from the protection of whales, to the development of vessel "Green Technology," to wastewater and wake control, all for the preservation of the environment. Nevertheless, it submits this Affidavit within the present limited context of there being no conclusive evidence showing that current systems have failed or that less severe measures might first be employed.

32. If called to testify, this Affidavit contains my testimony on the matters stated.

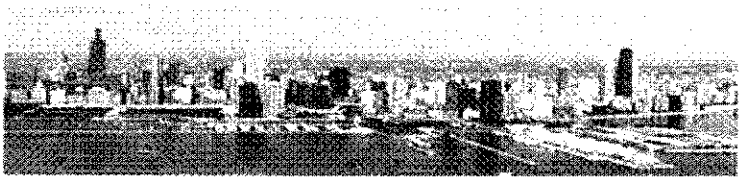
I hereby swear and affirm, under penalties of perjury, that the above, my Affidavit, is true and complete, on the best of my knowledge and belief.

John Groundwater,
Executive Director
Passenger Vessel Association

1884496

US Army Corps of Engineers
Chicago District

Chicago Harbor Lock



Located on Lake Michigan, at the mouth of the Chicago River, the Chicago Harbor Lock serves as a gateway to one of the nation's busiest commercial and recreational waterways. Over 50,000 vessels, 900,000 passengers, and 200,000 tons of cargo pass through its gates annually. The lock is operated by the OMNI Corporation via contract with the U.S. Army Corps of Engineers. It is open for navigation 24 hours per day, 7 days per week throughout the entire year.

Chicago Harbor Lock

Lock Chamber Characteristics

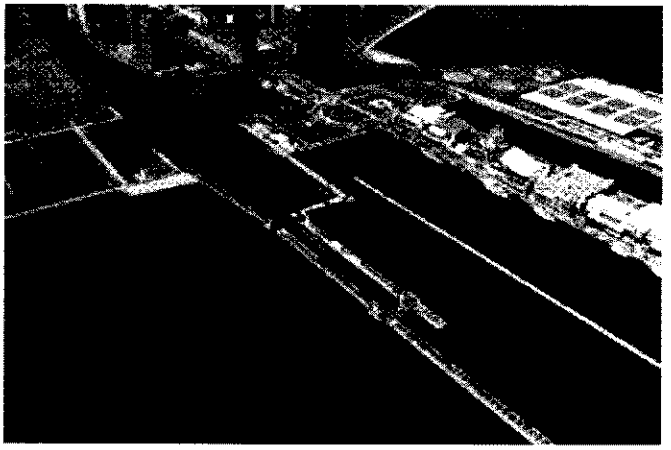
600 Feet Long

80 Feet Wide

22.4 Feet Deep

Lift: 1 to 4 Feet

Constructed in 1938



Contact Information

Lockmaster
Chicago Harbor Lock

Lock Ph# (312) 787-4795
Main Office Ph# (312) 846-5487
Email: chicago.lock@usace.army.mil

Page Last Updated: 25 August 2004

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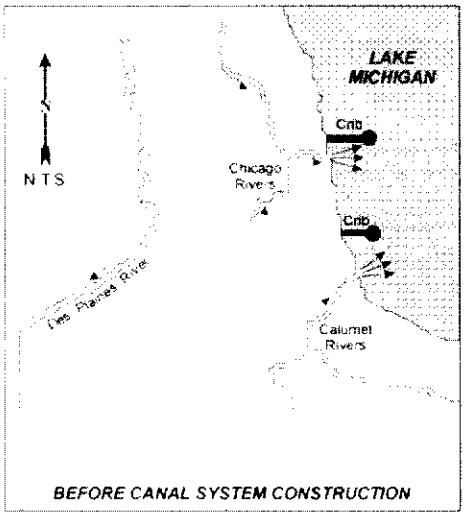
Chicago Sanitary and Ship Canal Aquatic Nuisance Species Dispersal Barriers

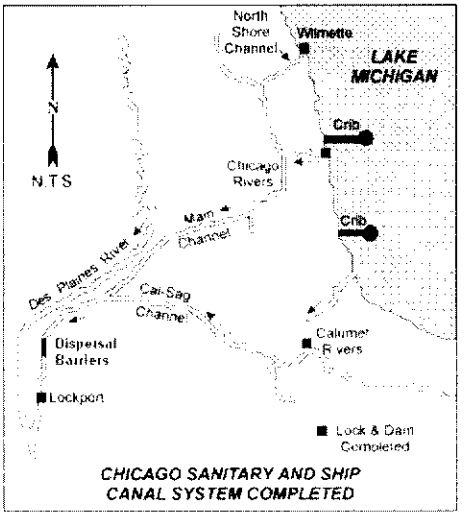
Project Manager: Shea, Chuck

Introduction:

The Chicago Sanitary and Ship Canal (CSSC) is a man-made waterway that provides a direct hydraulic connection between Lake Michigan and the Mississippi River Basin. As non-indigenous aquatic species

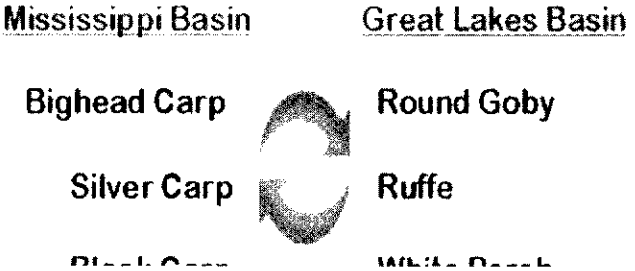


BEFORE CANAL SYSTEM CONSTRUCTION



CHICAGO SANITARY AND SHIP CANAL SYSTEM COMPLETED

use the CSSC to move between the two basins, they prey on native species and compete for food, living space and spawning areas. Currently the greatest concern is the potential movement of Asian carp into the Great lakes.



The Corps was authorized to conduct a demonstration project to identify an environmentally sound method for preventing the dispersal of aquatic nuisance species through the CSSC. The Corps formed an Advisory Panel,

Barrier Nav:

- Barrier Home
- Barrier Photos
- Barrier Safety Info

Barrier Links:

- Barrier Advisory Panel
- Fact Sheet
- USACE News Release 07 Aug 2009
- USACE News Release 11 Aug 2009
- USACE News Release 12 Aug 2009
- USACE News Release 19 Aug 2009

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cost for completion of both Barrier IIA and Barrier IIB is now $16 million. Additional laws must be passed to increase or waive the $9.1 million funding ceiling and appropriate further funds to the Barrier II project or Barrier IIB can not be completed.

Authorizations:

Demonstration Barrier: Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPACA) of 1990 (P.L. 101-636, as amended in 1996) and Section 2309 of P.L. 109-234, Emergency Supplemental Appropriations Act. Permanent Barrier: Section 1135, WRDA 1986 and Section 345 of P.L. 108-335, District of Columbia Appropriations Act, 2005.

Page Last Updated: 27 Aug 2009
Privacy and Security Notice
Information Quality Act (IQA)

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Asian Carp Rapid Response Workgroup

FOR IMMEDIATE RELEASE

December 8, 2009

CONTACTS: Chris McCloud (IDNR), 217 785-0075
Mick Hans (USEPA), 312-353-5050
Lynne Whelan (USACE), 312 846-5330
Lt. Dave French (USCG), 216 902-6021

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

U.S. Coast Guard

U.S. Environmental Protection Agency

Illinois Department of Natural Resources

Chicago Department of Environment

Great Lakes Commission

Great Lakes Fishery Commission

Great Lakes Interagency Task Force

International Joint Commission

Metropolitan Water Reclamation District

Midwest Generation

U.S. Department of Agriculture – APHIS

Wisconsin Sea Grant

Asian Carp Rapid Response Workgroup finishes operation on Cal-Sag Channel

No Asian carp collected above electrical barrier; safety zone rescinded

CHICAGO – The Asian Carp Rapid Response Workgroup has completed fishing operations near the T.J. O'Brien Lock in an attempt to locate Asian carp after eDNA sampling in the area tested positive for the invasive species. The Workgroup used commercial fishermen and federal fisheries personnel to deploy nearly 3,000 yards of fishing nets along a 5.5-mile stretch of the Cal-Sag Channel. While the nets were successful in collecting more than 800 fish, no Asian carp were found. The catch included more than 700 common carp and 10 other species.

The fishing operations that began on Dec. 1, wrapped up late yesterday, Dec. 7. On Monday evening, the U.S. Coast Guard reopened the Cal-Sag Channel and Little Calumet River to vessel traffic.

While the fishing operations and the Chicago Sanitary and Ship Canal rotenone application have thus far confirmed just one Bighead Asian carp, the Workgroup expects their work to continue for some time.

- more -

eDNA is serving its purpose as an early warning system and suggests that Asian carp may have reached the Cal-Sag Channel. Based on recent sampling and the fish collection efforts there, the Workgroup believes that if Asian carp are present, their numbers are likely very small. The Workgroup and its partners are committed to remaining vigilant in the future and exploring all options available to prevent the spread of Asian carp to the Great Lakes.

Among the next steps already underway to prevent the spread of the destructive fish to the Great Lakes:

- Illinois Department of Natural Resources and other partners will evaluate the week's efforts and develop options for additional carp population assessment and control in the Cal-Sag Channel and Chicago Sanitary and Ship Canal

- U.S. Army Corps of Engineers will continue their eDNA sampling effort with the University of Notre Dame

- U.S. Army Corps of Engineers are focused on addressing potential bypass issues (along the Des Plaines River, I&M Canal, Grand Calumet and Little Calumet River), the interbasin study and expedited construction of barrier IIB

- The Rapid Response Workgroup partners are evaluating a range of additional options and consequences for Asian carp prevention management strategies in the waterways—and potentially, further into the Great Lakes

The Asian Carp Rapid Response Workgroup includes the Illinois Department of Natural Resources, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Coast Guard, U.S. Department of Agriculture Animal and Plant Health Inspection Service, Chicago Department of Environment, Metropolitan Water Reclamation District of Greater Chicago, Midwest Generation, Great Lakes Commission, Great Lakes Fishery, Commission, International Joint Commission, and Wisconsin Sea Grant.

Fisheries management agencies from Indiana, Wisconsin, Michigan, Minnesota, Ohio, Pennsylvania, New York and Canada have also provided support to the operation.

For more information about Asian carp and the Rapid Response operations, see www.asiancarp.org/rapidresponse.

Additional media resources:

Marc Gaden (Great Lakes Fishery Commission), 734-744-5716

Larry Merritt (Chicago DOE), 312 744-5716

Asian Carp Management
Invasive Species Coordination Web Site

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- Rapid Response
- Partners Roles & Responsibilities
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- Frequently Asked Questions
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- USFWS News Release
- Fed Reg Announcement

Asian Carp Rapid Response

View Photos and Videos of the Rapid Response Efforts

12/18/09 - Summary of Sampling Efforts on the Cal-Sag

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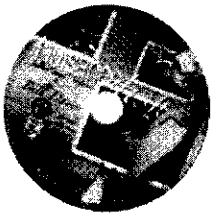
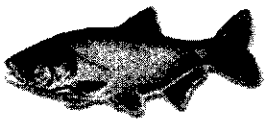
Read More..



Featured Video: Nuisance Fish by Bill Dance & the Tennessee Wildlife Resources Agency

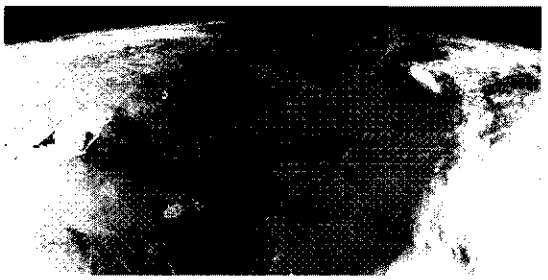
Bighead Carp
Hypophthalmichthys nobilis



SilverCarp
Hypophthalmichthys molitrix

Black Carp
Mylopharyngodon piceus

Grass Carp
Ctenopharyngodon idella



Asian Carp are an impending ecological disaster for the Great Lakes. The Great Lakes are the largest freshwater resource in the world, and it is the responsibility of federal and state agencies to protect this important ecosystem. An Asian carp working group made up of multiple Federal and state conservation partners has concluded that immediate action is needed to stop the carp from reaching Lake Michigan.

Current Situation
The electric barrier in the Chicago Sanitary and Ship Canal (CSSC) will be shut down for two to five days in early December for routine maintenance, providing an opportunity for the Asian carp to advance up the canal toward Lake Michigan. The electric barrier is currently the only protection against carp entering Lake Michigan via the CSSC. eDNA evidence suggests the Asian Carp are already very close to the electric barrier in the CSSC and are also present in the Des Plaines River, I & M canal and Calumet Sag Canal

The Rapid Response Plan

A task force of federal, regional state and local agencies has developed a Rapid Response Plan to address this impending threat to the Great Lakes.

In response to the increasing threat of the Asian carp expansion toward the Great Lakes and these fish placing greater pressure on barriers already in place to restrict their movement, the Asian Carp Rapid Response Workgroup was created. The purpose of the Workgroup was to assess the current situation and recommend courses of action should a rapid response be necessary to deal with Asian carp in areas of the Chicago Sanitary and Ship Canal, Des Plaines River, and the Illinois and Michigan Canal. In preparation for such a response, the Asian Carp Rapid Response Plan was created. At the request of partner agencies, the Illinois Department of Natural Resources (IDNR) has agreed to coordinate response actions and to serve as lead agency during response Operations.

The purpose of this plan is to establish, coordinate, and document actions by IDNR and its partner agencies to reduce the vulnerability of the Great Lakes to an Asian carp invasion via the Chicago Sanitary and Ship Canal (CSSC) and nearby bodies of water including the Des Plaines River and the Illinois & Michigan Canal (I&M). In the short term the purpose of rapid response measures, i.e. piscicide treatment, will accompany barrier maintenance, relieve pressure on Electric Barrier I (within the Lockport Pool), confirm presence of Asian carp previously detected through eDNA sampling and analysis, evaluate the feasibility and utility of applying piscicide in the CSSC to reduce or eliminate Asian carp populations, and validate the effectiveness of utilizing NIMS ICS concepts and principles of response for this type of effort via a multijunsdictional approach. In the long term permanent tools, such as piscicide treatment, would need to be implemented to mitigate the risk of Asian carp accessing Lake Michigan and the other Great Lakes.

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This plan outlines the responsibilities and support of federal, state, and local agencies, as well as partner entities. The plan also describes the response procedures necessary for protecting and maintaining the integrity and safety of the Great Lakes ecosystem, and ensuring the health and safety of responders. These aims will be accomplished by implementation of the following actions:

- Confirmatory identification and increased surveillance efforts
- Selection and isolation of target areas to maximize control or eradication of Asian carp
- Examination of the pros and cons of all response options
- Provision of risk communication, notifications, health alerts, and public information to all necessary audiences
- Coordinated rapid response in the target area to control the upstream spread of Asian carp via the CSSC and nearby bodies of water
- Post-treatment monitoring to ensure thorough response.

Subsequent to the initiation of any actions in conjunction with a rapid response an Incident Action Plan (IAP) will be developed. The IAP will include the following:

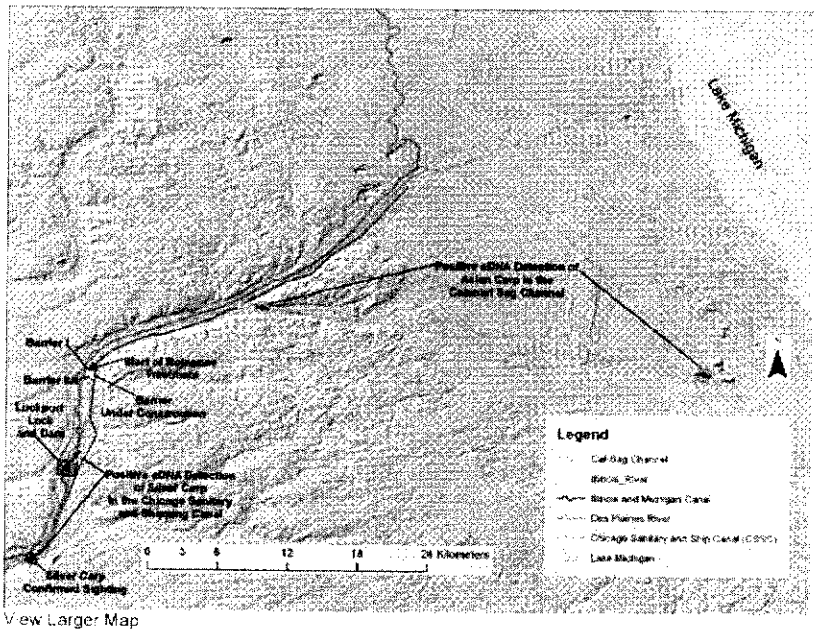
- Operational objectives and briefing information
- Organization and chain of command
- Available resources
- Status updates
- Additional safety/hazard information.

This rapid response plan focuses on three locations along the Des Plaines River, Illinois & Michigan (I & M) Canal, or the CSSC (Appendix A, Figures 1 through 5), including the divergence into the CSSC and beyond. These locations are:

- Lockport Lock and Dam to River Mile (RM) 296.7 encompassing the following - Areas between the electric barriers
  - Scenario of Electric Barrier shutdown or maintenance
- Des Plaines River at RM 297.0 upstream to RM 302.5
- I & M Canal from its confluence with the Brandon Road Pool of the Des Plaines River to the Cal-Sag Channel convergence

In the future it may be necessary to plan for rapid response actions encompassing the area beyond the electric barrier system to Lake Michigan, however at this time an effective treatment plan for this area has not been formulated.

Mission
Through the Asian Carp Rapid Response Workgroup, the State of Illinois, with support from federal and local agencies, and other private entities will implement procedures and actions to protect and maintain the integrity and safety of the Great Lakes ecosystem from an Asian carp invasion via the CSSC, and to ensure the health and safety of responders and that of local personnel and residents.



View Larger Map

U.S. Fish & Wildlife Service

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Asian Carp Management

Invasive Species Coordination Web Site

- Home
- Rapid Response
- Partners Roles & Responsibilities
- Threat to the Great Lakes
- Important Information About Rotenone
- Frequently Asked Questions
- Pressroom
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- USFWS News Release
- Fed. Reg. Announcement

Partners Roles and Responsibilities

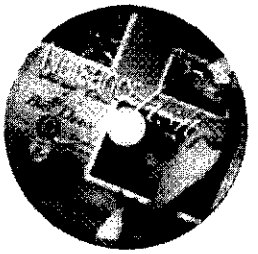
Primary Rapid Response Planning Organizations
Implementation of this plan at any of the three locations described in Section 1.2 or during the emergency scenario will depend on the cooperation of a broad variety of organizations and agencies, including, but not limited to, the agencies listed in this section and Section 2.3 below. This section describes federal, state, and local agencies/stakeholders that have legal authorities in conjunction with an AIS introduction specific to the target areas. Note: This section may be subject to revision pending additional information gathered from responding agencies.

Illinois Department of Natural Resources (IDNR)
According to the Department of Natural Resources Act (DNRA) (20 ILCS 801/1-15) "It shall be the duty of the Department to investigate practical problems, implement studies, conduct research and provide assistance, information and data relating to the technology and administration of the natural history, entomology, zoology, and botany of this State; the geology and natural resources of this State; the water and atmospheric resources of this State; and the archeological and cultural history of this State." IDNR is the lead fisheries management agency within the state of Illinois; as such and in accordance with DNRA, IDNR will serve as lead responding agency in rapid response operations against Asian carp for the treatment of the waterways that fall under the scope of this plan utilizing all available personnel and equipment in these actions. Working in conjunction with the State of Illinois, the director of IDNR shall activate the Rapid Response Plan and established notification list.

Illinois DNR Office of Law Enforcement - Conservation Police
The Conservation Police are the law enforcement branch of the IDNR. As IDNR is serving as lead agency for rapid response operations, the Conservation Police will act as lead security agency for response activities onsite. They will be responsible for providing a Site Security Plan (Appendix D) and coordinating with other agencies to provide security for all personnel and assets onsite.

United States Coast Guard (USCG)
USCG delegation of public duties is found in Volume 33 of the Code of Federal Regulations section 3.01. Duties include (1) enforcement of port safety and security and of marine environment protection regulations within areas for which USCG is responsible, and (2) operations for protection and security of vessels and waterfront facilities in that waterway. The Captain of the Port shall be responsible for closing this waterway for its security, if necessary, during such operations.

USCG Sector Lake Michigan, Milwaukee
Based on its proximity to the area and vested interest in the Great Lakes, the USCG Sector



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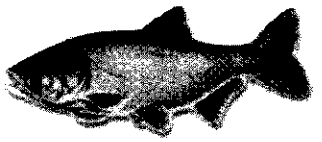
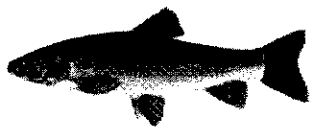


SilverCarp
Hypophthalmichthys molitrix



Black Carp
Mylopharyngodon piceus

Grass Carp
Ctenopharyngodon idella

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Lake Michigan stationed in Milwaukee, Wisconsin, (USCG Milwaukee) would also assist in response operations based on the availability of resources at the time of response. USCG Milwaukee will provide trained personnel to the effort and assist as necessary. USCG Milwaukee has assets in the areas north and south of the barrier system that could actively patrol these waters. During times of response in this area, USCG Milwaukee may be able to utilize these resources to patrol these waters and maintain security and safety.

USCG Marine Safety Unit (MSU)
The USCG Marine Safety Unit Chicago is responsible for executing the USCG Port Safety and Security, Marine Environmental Protection, and Commercial Vessel Safety missions under the auspices of the Department of Homeland Security. The USCG MSU will serve in an advisory capacity to support USEPA during response operations.

Metropolitan Water Reclamation District of Greater Chicago
The Metropolitan Water Reclamation District of Greater Chicago (District) operates Publicly Owned Treatment Works (POTW) which treats wastewaters from domestic, commercial, and industrial sources in Chicago and numerous surrounding communities. The District's jurisdictional authority consists of ownership of land on both sides of the CSSC to its confluence with the Des Plaines River at RM 290.0. As such, access to any adjacent properties must be granted through the District.

US Army Corps of Engineers

United States Army Corps of Engineers (USACE)
The USACE has authority for all matters pertaining to the electric barrier system in place within the Lockport Pool of the CSSC, including operations, care, maintenance, and anything that may affect the system. It also has authority over the operation of the lock and dam system in place within the CSSC. During any rapid response operations, the USACE will be responsible for the closing of the Lockport Lock and Dam prior to a Rapid Response and the Brandon Road Lock and Dam if necessary. USACE will also monitor the barrier system before, during, and following rapid response to ensure sustained operations. USACE also serves on the Asian Carp Rapid Response Workgroup to advise on recommendations affecting response options.

United States Environmental Protection Agency (USEPA)
As a general rule under the National Environmental Policy Act (NEPA), federal agencies must consider the environmental impacts of "major federal actions significantly affecting the human environment" and identify unavoidable environmental impacts before implementing the proposed action. In compliance of NEPA, USEPA will prepare an Environmental Assessment (EA) to ensure protection of the environment particularly with a focus on endangered species. In addition,

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to comply with FIFRA USEPA will ensure that any registered piscicide used will be applied under established registration procedures, specifically section 24c of the Registration Eligibility Decision (RED). The USEPA may provide additional personnel for response actions based on availability and time of response.

United States Fish and Wildlife Service (USFWS)
In working to protect native fish populations and important commercial and recreational fisheries, USFWS plans to support the planning and operations of a rapid response action by supplying in-kind assets such as personnel, equipment, other supplies, and technical expertise. USFWS will be listed as the agency with primary responsibility for the Science Advisory Team. USFWS designated personnel will also serve as part of the Incident Management Team. Fiscal resources may be offered to support rapid response actions if funding allows. Prior to plan initiation, USFWS will develop and implement MOUs or other Interagency Agreements that fulfills the purpose of clearly defining the specific roles and responsibilities of each agency acting to support the Asian Carp Rapid Response Plan.

Supporting Rapid Response Planning Organizations
The following organizations and agencies will support operations for an AIS rapid response as they have a vested interest in participating in such actions so as to protect the Great Lakes from introduction of Asian carp. A summary of intentions is presented below for each supporting organization or agency.

Great Lakes Fishery Commission (GLFC)
The GLFC has a long history of battling to control aquatic invasive species within the Great Lakes basin. Consistent with this tradition, the GLFC will offer trained personnel and emergency funding to rapid response operations. The GLFC will also lobby state and federal governments to garner support for operations, and request legislation for any long-term efforts aimed at controlling Asian carp and its expansion in the waters of the Great Lakes.

City of Chicago
To support the efforts to restrict Asian carp downstream of the electric barrier system, the City of Chicago will respond to any Asian carp operations in accordance with the City's Emergency Operations Plan (EOP)—each city department will conduct its responsibilities as designated in the EOP. The City also will apply resources and assets to support these efforts.

International Joint Commission (IJC)
Through the ongoing commitment of the IJC to protect all Boundary Waters between the U.S. and Canada, the IJC will support the rapid response actions to mitigate the threat of Asian carp to the Great Lakes. The IJC will offer support through participation in the response planning initiative and advocate for government support for the project if the circumstances merit these activities.

Midwest Generation, LLC

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Midwest Generation will support the effort at Asian Carp control by monitoring its Will County station intake pipes for the presence of Asian Carp. They will adjust operation as needed to support response operations. Midwest Generation will remain in communication with IDNR and USEPA to report any new findings. Their operations are likely to be affected by any rapid response actions; as such they will be notified as soon as possible following a decision to implement a rapid response so that they may plan accordingly.

Affected Counties
Local law enforcement, county/local Offices of Emergency Management, Emergency Medical Services (EMS), fire departments, etc. should all be notified of pending operations within their jurisdictions so they may prepare for potential actions. Local law enforcement may be needed to support mission in their respective jurisdictions.

Other Support State and Provincial Agencies
Fisheries management agencies from the States of Indiana, Michigan, Minnesota, New York, Ohio,
Pennsylvania, and Wisconsin will supply in-kind support as available and able in the form of personnel, equipment, chemicals, or financial contributions. Though these agencies have no authority within the proposed areas of action, they recognize the threat of the Asian carp expansion and strive to maintain the integrity of the Great Lakes.

Working to foster bi-national support for Asian carp control, Fisheries and Oceans Canada plans to support treatment of the CSSC and subsequent clean-up activities in Illinois by supplying in-kind support in the form of expertise, personnel, and equipment as available. Though they have no authority in the target area, their Aquatic Invasive Species Program is focused on prevention and keeping Asian carp out of the Great Lakes. The Ontario Ministry of Natural Resources, through their ongoing collaboration with Fisheries and Oceans Canada for AIS prevention in the Great Lakes, will be providing support for in-kind resources and assets to be used in conjunction with rapid response operations. Additionally the province of Quebec will provide fiscal resources to Illinois in support of a rapid response has funds are available.

U.S. Fish & Wildlife Service

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Metropolitan Water Reclamation District of Greater Chicago

RESEARCH AND DEVELOPMENT DEPARTMENT

REPORT NO 08-15

DESCRIPTION OF THE CHICAGO WATERWAY SYSTEM FOR THE USE ATTAINABILITY ANALYSIS

March 2008

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
100 East Erie Street Chicago, IL 60611-2803 (312) 751-5600

DESCRIPTION OF THE CHICAGO WATERWAY SYSTEM

FOR THE USE ATTAINABILITY ANALYSIS

Research and Development Department
Louis Kollias, Director

March 2008

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CHICAGO WATERWAY SYSTEM

The Chicago Waterway System (CWS) consists of 78 miles of canals, which serve the Chicago area for two principal purposes, the drainage of urban storm water runoff and treated municipal wastewater effluent, and the support of commercial navigation. While the CWS was not constructed with recreational or aquatic life uses in mind, other purposes have evolved over time including recreational boating, fishing, streamside recreation and, where possible, aquatic habitat for wildlife. Approximately 75 percent of the length are man-made canals where no waterway existed previously and the remainder are natural streams that have been deepened, straightened and/or widened to such an extent that reversion to the natural state is not possible. The flow of water in the CWS is artificially controlled by hydraulic structures (see Figure 1).

Due to the artificial nature of the CWS, its ability to support aquatic life and recreational uses are inherently limited. The absence of gradual sloping banks, shallow littoral zone habitat, and bends result in a limited habitat for aquatic biota. Homogenous silt sediments that severely restrict macroinvertebrate and fish populations are deposited throughout much of the CWS due to the unnatural stream flow dynamics. Some recreational activities can be hazardous in the CWS, due to the extent of commercial traffic, as well as the lack of safe exit points from the water.

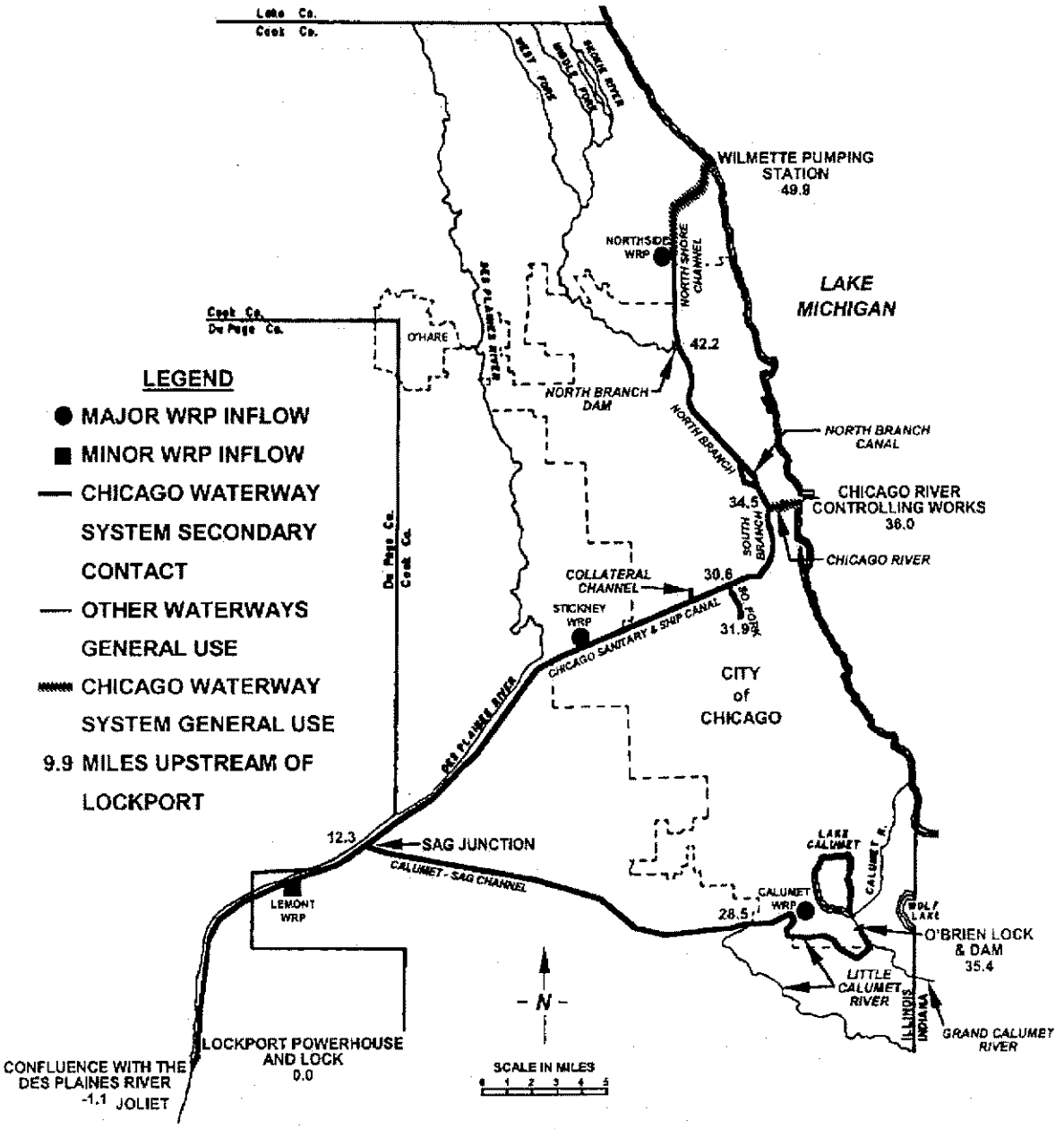
System Description

The Lockport Controlling Works (LCW) is one of two outlet control structures for the CWS. All flow from the CWS's 740 square mile watershed discharges from the Chicago Sanitary and Ship Canal (CSSC) to the Des Plaines River north of the city of Joliet. The confluence is 1.1 miles downstream of the Lockport Powerhouse and Lock (LP&L). This reach is the upper end of the Brandon Road navigation pool. The LP&L is the single outlet control for the CWS. It should be noted that on Figure 1, distances on the CWS are measured from the LP&L. The CWS has two river systems, the Calumet River System and the Chicago River System.

The Calumet River System is 23.1 miles in length and includes the Calumet-Sag Channel (CSC) and the Little Calumet River (LCR) (also called the LCR North). The Chicago River System consists of 55.1 miles of waterways and includes the Chicago River, CSSC, North Branch, North Branch Canal (NBC), North Shore Channel (NSC), South Branch, and South Fork. The South Fork is commonly known as Bubbly Creek. Each river system will be described separately.

Chicago River System. The CSSC extends upstream from the confluence with the Des Plaines River for a distance of 31.1 miles to South Damen Avenue in the city of Chicago (Chicago). The waterway then becomes the South Branch, extending upstream for 4.5 miles to the junction of the Chicago River and the North Branch. The South Fork flows into the South Branch and extends upstream for 1.3 miles, ending at 38th Street in Chicago. The Chicago River extends upstream from the junction of the North and South Branches for 1.5 miles and ends at

FIGURE 1: CHICAGO WATERWAY SYSTEM



the Chicago River Controlling Works (CRCW). The North Branch extends upstream from the junction of the Chicago River and South Branch for 7.7 miles to the North Branch Dam, located south of Foster Street in Chicago. The NBC is an alternate route around Goose Island between Chicago and North Avenues and is 1.0 mile long. At the North Branch Dam, the waterway becomes the NSC, extending upstream for 7.7 miles, ending at the Wilmette Pumping Station (WPS).

Calumet River System. The CSC extends upstream from its junction with the CSSC (Sag Junction) for 16.2 miles to the LCR. At this point, the waterway becomes the LCR and extends upstream 6.9 miles, ending at the O'Brien Lock and Dam (OL&D). It should be noted that the Calumet River extends upstream of the OL&D to Lake Michigan. However, since the Calumet River is directly connected to Lake Michigan, it is not considered part of the CWS. The water level and flow in the Calumet River can not be controlled the way that the CWS is controlled.

Tributaries to the Chicago Waterway System. There are several streams that contribute flow to the CWS. These include the Grand Calumet River, LCR above its confluence with the CWS (also called LCR South), the North Branch above the North Branch Dam and numerous small watersheds along the CSC and CSSC. In addition, there are numerous small stormwater drainage inputs along the CWS, including areas served by storm sewers, parking lots, street ends, rooftop drains, etc.

Control and Management of Flow

Flow in the CWS is managed by the Metropolitan Water Reclamation District of Greater Chicago (District), but is subject to regulation under U. S. Supreme Court Decree and 33 CFR Parts 207.420 and 207.425. The CFR provides for the maintenance of navigable depths to support commercial navigation. The Chicago River at the CRCW and the LCR at the OL&D must be maintained between -0.5 feet, Chicago City Datum (CCD) and -2.0 feet, CCD water levels per Code of Federal Regulations during normal conditions. The water level at the Sag Junction must be maintained between -4.0 feet, CCD and -1.8 feet, CCD. The lower limits allow the federal navigation project depths to be maintained throughout the CWS above the LP&L, while the upper limit prevents unintentional reversal into Lake Michigan. The ideal water elevation at CRCW and the OL&D is -2.00 feet, CCD. This water elevation provides the greatest level of flood protection by maintaining the highest allowable capacity available for the transportation of stormwater runoff without requiring permission from the United States Army Corps of Engineers (USACE) to further lower the water elevation. The upper limit of -1.80 feet, CCD and -2.00 feet, CCD at the Sag Junction and the LCW, respectively, are set to prevent washout of the soil banks of the canal at the LP&L.

The U. S. Supreme Court Decree governs the quantity of water from Lake Michigan that is diverted out of the Great Lakes Basin into the Mississippi River Basin by the State of Illinois (Illinois). Within Illinois, this quantity is subject to regulation by the Illinois Department of Natural Resources, Division of Water Resources (DWR). The DWR issues allocation orders for

annual average quantities of diversion. Most of the diversion is allocated to municipalities for domestic consumption. The District has an order that allows it to divert water for improvement of water quality and this is referred to as discretionary diversion. Currently and through 2014, the District allocation is for an annual average of 270 cubic feet per second (cfs). In 2015, it is scheduled to be reduced to an annual average of 101 cfs.

An additional annual average of 35 cfs is allocated to the District for navigation makeup. This is necessary to restore the CWS to the required water level for navigation following a system draw down for wet weather operations.

There are two other diversion categories which do not have a specific allocation, but for which the DWR maintains a reserve quantity. An approximate annual average of 100 cfs is the reserve needed for operation of the locks at CRCW and OL&D for passage of navigation traffic.

Another approximate annual average of 50 cfs is reserved for leakage through the walls and structures separating the lake and river. The actual amount of each of these reserves varies with the level of Lake Michigan.

Accounting for the amount of water diverted from Lake Michigan is the responsibility of the DWR and the USACE, Chicago District. The measurement of quantities of diversion and the method of accounting are specified in the U. S. Supreme Court Decree and in a 1996 Memo of Understanding between the U. S. Department of Justice and the several states bordering the Great Lakes.

Inflow and Outflow

All outflow exits the CWS at the LP&L and the LCW. However, there are several sources of inflow to the CWS. These include WRP effluent, discretionary diversion, navigation and leakage, tributaries, storm runoff, and combined sewer overflows (CSO).

Outflow. The average annual flow leaving the CWS in Water Year (WY) 2005 was 2,725 cfs as measured by the U. S. Geological Survey (USGS) at Romeoville Road. Maximum and minimum daily discharge during WY 2005 was 13,973 and 1,287 cfs, respectively. Since 1986, the maximum and minimum WY annual average discharges have been 4,113 and 2,342 cfs, respectively. The maximum instantaneous discharge was 19,500 cfs on February 21, 1997. There are periods of zero and negative discharge due to operations at the LP&L and the hydraulic peculiarities of the CWS.

Water Reclamation Plant Effluent. Over 70 percent of the annual flow in the system is from the discharge of treated municipal wastewater effluent from the Calumet, Lemont, North Side, and Stickney Water Reclamation Plants (WRPs) owned and operated by the District. During the winter months, virtually 100 percent of the flow is from these WRPs; during the summer

months, about 50 percent of the flow is from the WRPs. The WRPs are also shown on Figure 1. During 2006, these WRPs had the following flow characteristics:

WRP	Average Annual Flow (MGD*)	Design Average Flow (MGD*)	Design Maximum Flow (MGD*)
Calumet	283	354	430
Lemont	2.31	2.3	4.0
North Side	244	333	450
Stickney	729	1,200	1,440

*MGD=million gallons per day (1 MGD = 1.547 cfs).

Discretionary Diversion. Discretionary diversion is introduced into the system from Lake Michigan to maintain adequate water quality. This occurs at three locations, WPS, CRCW, and OL&D, shown on Figure 1.

Discretionary diversion is seasonal and is scheduled such that most flow is during warm weather months of June through October. Some flow is scheduled throughout the year for the NSC due to more sensitive water quality conditions. Discretionary diversion flows for calendar year 2006 were as follows:

Inflow Facility	Average Annual (cfs)	Monthly	
		Minimum (cfs)	Maximum (cfs)
WPS	40.4	0	129
CRCW	127.5	0	428
OL&D	83.5	0	303

Navigation and Leakage. This flow consists of discharge to support navigation in the operation of locks and leakage through structures and walls separating the lake and river. There is no navigation traffic at the WPS. It should be noted that navigation flows are seasonal. In addition, the quantity is dependent on the lake level, since flow at CRCW and OL&D is by gravity only. Leakage, formerly a significant quantity at CRCW, has been reduced through repair of gates and construction of new walls. The average annual, monthly maximum, and monthly minimum flows at each of these facilities for calendar year 2006 were as follows:

Facility	Navigation			Lockage			Leakage		
	Average Annual (cfs)	Monthly Max (cfs)	Monthly Min (cfs)	Average Annual (cfs)	Monthly Max (cfs)	Monthly Min (cfs)	Average Annual (cfs)	Monthly Max (cfs)	Monthly Min (cfs)
WPS	0	0	0	0	0	0	1.3	2.2	0.0
CRCW	27.4	101	0	13.8	32	1.0	14	19	10.0
OL&D	8.7	52	0	19.1	43	4.0	8.9	10	7.0

The average annual discharge for WY 2006 measured by the USGS downstream from CRCW is 155 cfs. Due to a lack of funding, the gauges at the other two intake facilities, OL&D and WPS are no longer active.

Tributaries. The major tributaries to the CWS are the LCR, which has a watershed area of over 210 square miles, and the North Branch Chicago River, with a watershed area of 113 square miles. Other tributaries discharging into the CSC include Crooked Creek, East Stony Creek, Illinois and Michigan Canal, Midlothian Creek, Mill Creek, Navajo Creek, Saganashkee Slough, Tinley Creek, and West Stony Creek. Tributaries discharging into the CSSC include the Illinois and Michigan Canal diversion ditches and Summit-Lyons Conduit. Please refer to the CWS Listing of Facilities, Inflows, and Monitoring Locations (CWS List) located at the end of this report.

Storm Runoff. Numerous storm sewers discharge to the CWS from several municipalities and Illinois Department of Transportation drainage facilities. A complete inventory of these facilities is not available.

Combined Sewer Overflow. The combined sewer area within the District serves a collection area of approximately 375 square miles, which includes most of the city of Chicago. There are 177 National Pollutant Discharge Elimination System (NPDES) permitted CSOs that discharge to the CWS from about 40 municipalities and the District. The District has a comprehensive CSO outfall inventory available at www.mwrd.org.

Major Pumping Stations. The CSO outfalls include five major pumping stations (PS) which serve a collection area of about 54.8 square miles. These stations include the Racine Avenue PS, which discharges into the South Fork of the South Branch of the Chicago River (also known as Bubbly Creek); the 95th Street PS, which discharges into the Calumet River; the 122nd Street PS, which discharges into the Calumet River; the 125th Street PS, which discharges into the Little Calumet River, and the North Branch PS which discharges into the North Branch of the Chicago River. The pumping capacities of these major pumping stations to the CWS during storm events are detailed below:

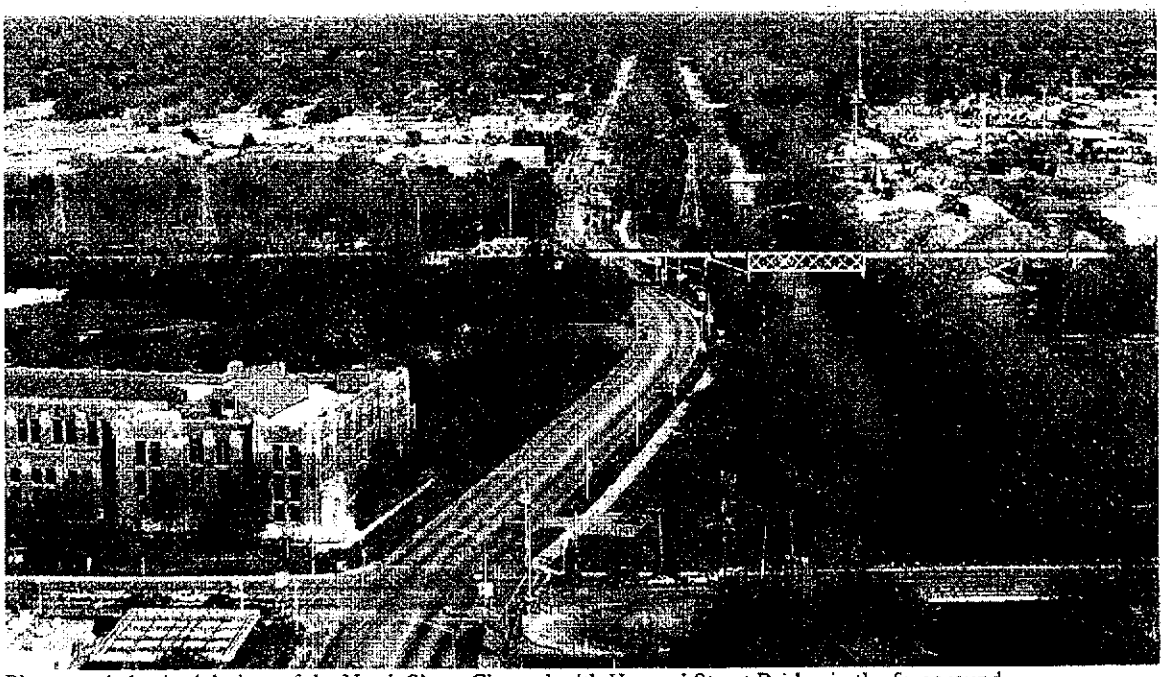
Pumping Station	Pumping Capacity to the CWS During Storm Events (cfs)
North Branch PS	1,500
Racine Avenue PS	3,125
95th Street PS	855
122nd Street PS	375
125th Street PS	1,140

PHYSICAL DESCRIPTION OF THE WATERWAYS

Chicago River System

North Shore Channel. (Photograph 1) This man-made channel is 7.7 miles in length and is straight throughout except for four bends in alignment near Devon and Central Avenues and Emerson and Linden Streets. It has steep earthen side slopes and a width of 90 feet. The depth varies from 5 to 10 feet. The NSC was completed in 1910 in order to divert water from Lake Michigan to dilute and flush wastewater downstream through the North Branch Chicago River. It also served as a conveyance for wastewater from communities north of Chicago.

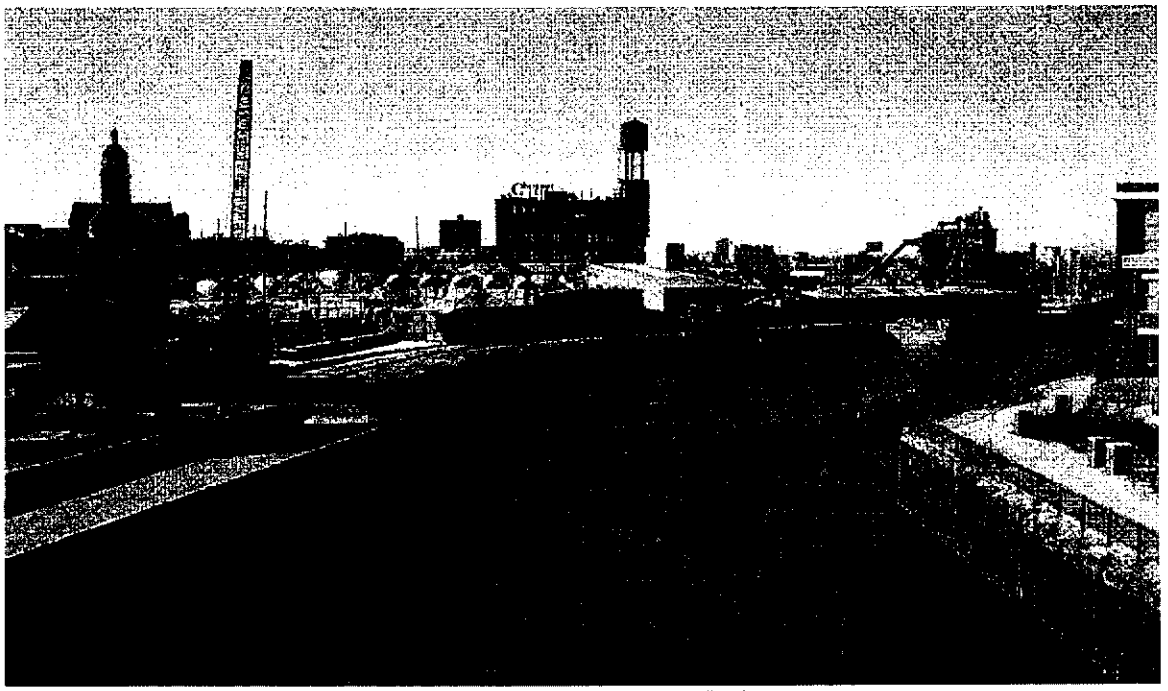
Land use along the NSC is generally urban commercial and residential. In-stream aquatic habitat is often present along the partly shaded banks, in the form of aquatic plants, tree roots, and brush debris jams. Presently, there are often stagnant flow conditions in the NSC above the North Side WRP discharge. In the northernmost reaches of the NSC, near Central Avenue, a variety of sediment types are present and the depth of fines is generally one foot or less. Just upstream of the North Side WRP, at Oakton Avenue, silt makes up the majority of sediment composition, with deeper depth of fines than the upstream reaches (2-4 feet). In the reach directly downstream of the North Side WRP, near Touhy Avenue, a majority of the sediment is comprised of sand. Depth of fines range from under a foot up to 5 feet. Near Foster Avenue, approaching the confluence with the North Branch Chicago River, sediment is mixed and depth of fines is less than a foot.



Photograph 1: Aerial view of the North Shore Channel with Howard Street Bridge in the foreground.

North Branch Chicago River. (Photograph 2) From the junction of the Chicago River and the South Branch upstream to Belmont Avenue, a distance of 5.1 miles, the river follows its original course and has several bends. The North Branch is a natural portion of the CWS that was historically straightened, widened, and dredged to accommodate increased volume of diluted wastewater from the man-made NSC. The width varies from 150 to 300 feet and the depth varies from 10 to 15 feet. In several reaches, vertical dock walls have been constructed and are in various states of disrepair. From Belmont Avenue to the North Branch Dam, 2.6 miles, the channel has been either straightened or relocated into fairly straight segments with steep earthen side slopes. The width is generally 90 feet and the depth is approximately 10 feet in the center part of the channel.

Today, the northern deep-draft portion of the North Branch Chicago River by Wilson Avenue has mostly urban residential land use and contains in-stream habitat with logs, boulders, and an under-cut bank. In these upstream reaches, sediment is comprised mostly of cobble and sand, with fine sediments usually less than a foot deep. Further downstream, near Diversey Avenue, land use changes to mostly commercial/industrial, and there is decreased canopy cover. Sediment consists mostly of silt with scoured concrete in some areas, and depth of fines ranges from approximately 1-3 feet. There is limited in-stream habitat near the banks, including debris jams, boulders and tree roots. As the North Branch approaches downtown Chicago, physical habitat is further degraded. Near Grand Avenue, land use is primarily industrial/commercial, with periodic vertical sheet pile walls and concrete "banks." There is a lack of in-stream habitat and little canopy cover. Sediment is comprised primarily of silt with depth of fines ranging from 1 to greater than 5 feet.



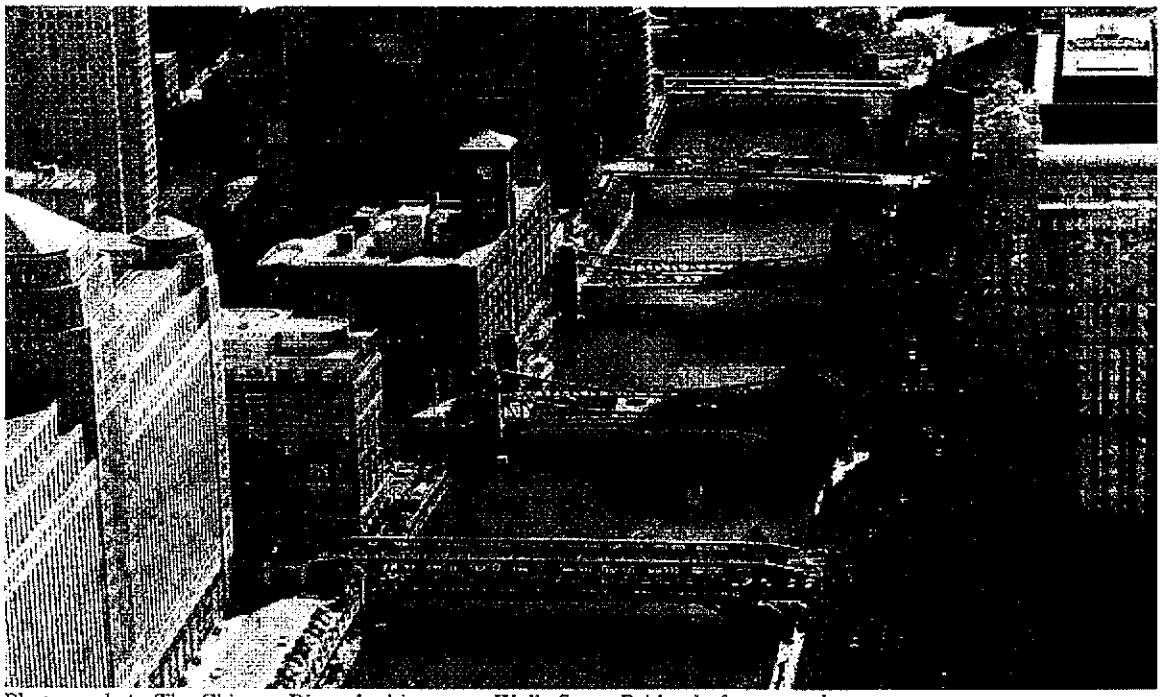
Photograph 2: North Branch Chicago River, west from Halsted Street Bridge.

North Branch Canal. (Photograph 3) This canal was man-made in the 1870s. It forms the east side of Goose Island, has a straight alignment and is one mile in length. The width varies from 80 to 120 feet and the depth from 4 to 8 feet.

Photograph 3: North Branch Canal, northwest from Halsted Street Bridge.

Chicago River. (Photograph 4) The Chicago River, 1.5 miles in length, is 200 feet wide west of Michigan Avenue and wider, up to 400 feet wide, east thereof. It has vertical side walls throughout its length. It is 20 feet deep at the west end and 26 feet deep at the east end. The river alignment is generally straight with three bends near Michigan Avenue and State and Orleans Streets. The Chicago River historically flowed into Lake Michigan, but was reversed by the construction of the CSSC, and the mouth of the river was altered where it met Lake Michigan. Its entire length was also dredged, widened, and straightened so that shipping vessels could travel through it in the 1800s and to facilitate urban development of the downtown area.

Currently, the Chicago River contains extreme physical limitations to recreation and aquatic habitat, as it flows right through downtown Chicago and contains steep vertical sheet piling walls. There are no shallow areas and there is very little to no canopy cover. Fine grained silt sediments predominate. Because of the temperature and salinity differential between the warmer, more saline water from the NBCR and the colder, less saline water of Lake Michigan, density currents are sometimes established in the Chicago River. These density currents can result in simultaneous bi-directional flow in the Chicago River. In addition, the gradient of the bed is very small, making it difficult to push the water out of the Chicago River.



Photograph 4: The Chicago River, looking east. Wells Street Bridge in foreground.

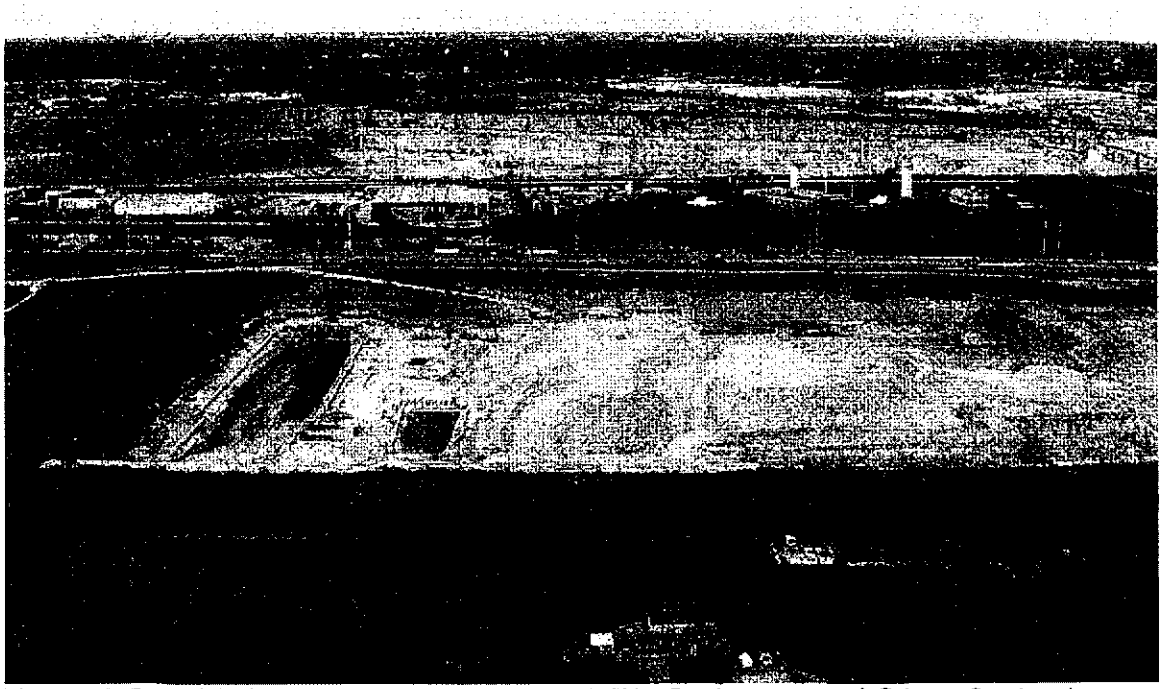
South Branch Chicago River. (Photograph 5) This 4.5 mile long segment generally follows its original course and has several bends, though it was somewhat straightened and channelized between 1928–1929 for the convenience of navigation. A short reach between Roosevelt Road and 18th Street was relocated in 1928 to eliminate a major bend. The South Branch has vertical dock walls throughout most of its length. The width varies from 200 to 250 feet and the depth from 15 to 20 feet.

Today, there is very little in-stream habitat or canopy cover along the South Branch and urban industrial and commercial land uses predominate. Near Madison Street in downtown Chicago, the sediment is almost entirely made up of silt, with about one foot depth of fines. Downstream at Loomis Street, the side channels are mostly scoured bedrock with silt and sludge deposits in the center. Depth of fines range from 3-5 feet in these center sediments.

Photograph 5: Northeastern aerial view of the South Branch Chicago River. Loomis Street Bridge in the foreground.

Chicago Sanitary and Ship Canal. (Photograph 7) This 31.1 mile long man-made channel has many different shapes and sizes. Its alignment is straight throughout its length, except for four bends, near Harlem Avenue, La Grange and Romeoville Roads, and in Lockport. Downstream of the LP&L, a reach of 1.1 miles, the depth is 10 feet and the width is 200 feet. Upstream of the LP&L, the depth varies from 20 to 27 feet. The reach immediately upstream of the LP&L, 2.4 miles in length, varies in width from 160 to 300 feet. The east bank of this reach is a vertical concrete wall. The west bank varies from vertical dock wall to a steep rockfill embankment. The next 14.6 miles of the CSSC have vertical concrete or rock walls 160 feet apart. The last 13.0 miles have a trapezoidal shape, 220 feet wide, with steep earth or rock side slopes. There are several areas with vertical dock walls in this last reach.

Excavation of the CSSC from the South Branch Chicago River to Lockport was completed in 1900. Its construction facilitated the reversal of the Chicago River such that Chicago's wastewater no longer flowed into Lake Michigan. Industrial and commercial land use dominates the riparian zone along most of the CSSC. There is little to no canopy cover and in-stream habitat for aquatic life is limited to snags and debris accumulated near bridge abutments. Silt and sludge comprises a majority of the sediment at Damen Avenue, with depth of fines ranging from <1-9 feet. At Cicero Avenue, deposited sediments are comprised of mostly silt and sludge, with <1-4 feet depth of fines. Sediment was slightly more variable at Harlem Avenue, where silt predominated, but there was also sand, gravel, cobble, and boulders near the bridge. The bedrock was exposed due to scouring near Route 83 and Stephen Street, with some scattered silt deposits. Areas of scouring, as well as pockets of deep silty sediments also occur near Lockport, although habitat improves slightly near the sunken barges on the west bank. Aquatic vegetation and snags are present in this shallow area with deep sand and silt deposits.

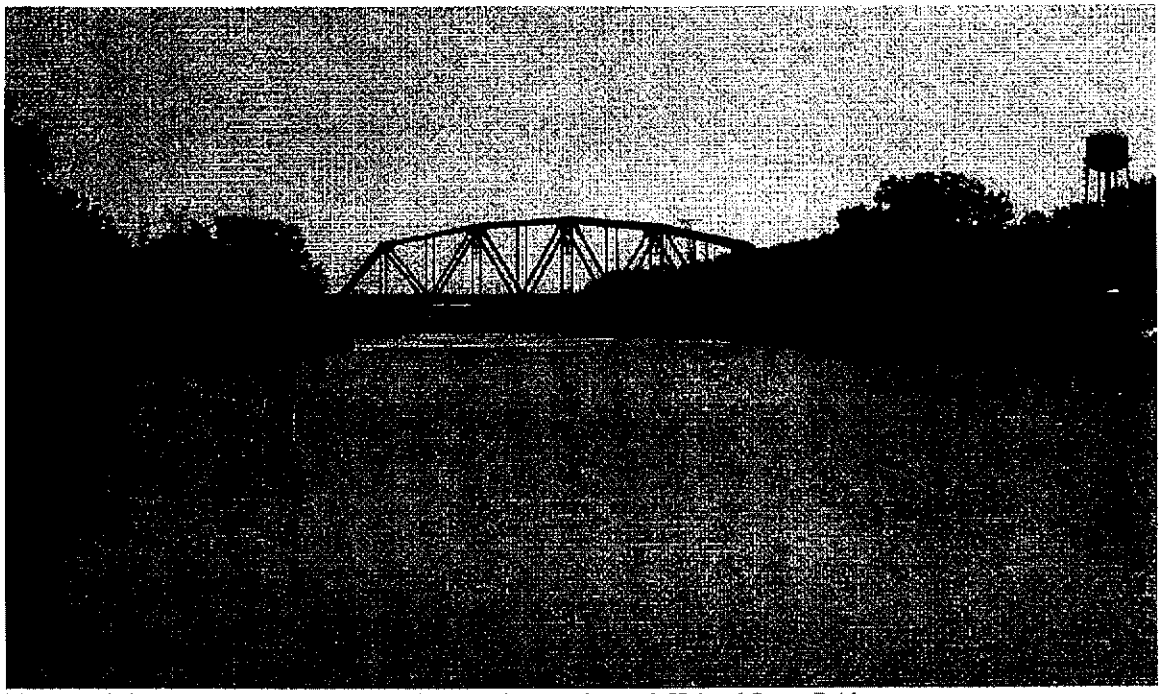


Photograph 7: Aerial view of the Chicago Sanitary and Ship Canal, upstream of Calumet-Sag junction, near McCook Reservoir (under construction).

Calumet River System

Little Calumet River. (Photograph 8) The LCR, 6.9 miles in length, has been deepened and widened from its original natural condition. There are several changes in alignment, with one full 180-degree bend west of Indiana Avenue. Its width varies from 250 to 350 feet and its depth is generally 12 feet in the center part of the channel. It has few vertical dock walls and most of the banks are earthen side slopes.

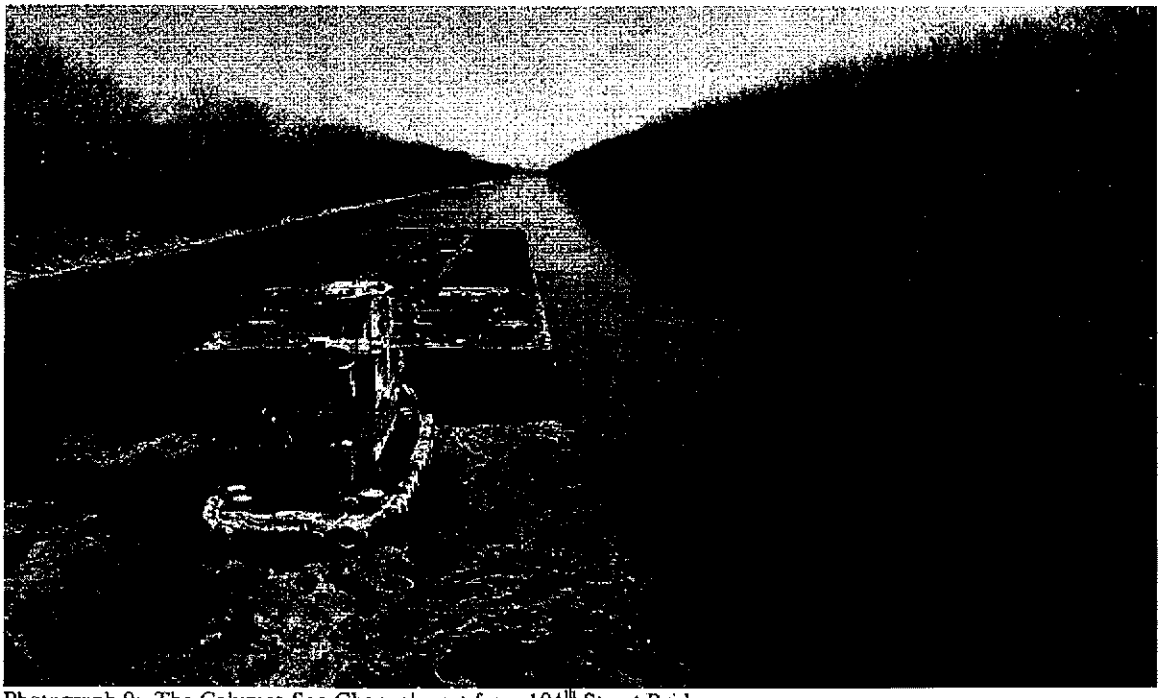
In-stream habitat for aquatic life is generally available along the LCR in the form of boulders, logs, brush debris jams, overhanging terrestrial vegetation, and aquatic vegetation in some reaches. Riparian land use along the LCR upstream of the Calumet WRP outfall, near Indiana Avenue, is generally urban industrial and commercial. The sediments in this reach are mostly characterized by sludge and silt deposits, but there are also gravel substrates in the center of the river. Depth of fines range from <1 to 7 feet. Downstream of the WRP, at Halsted Street, land use varies from urban commercial to forest and wetland. Sediments are relatively heterogeneous, although the substrate is sometimes scoured in the center, with exposed bedrock. Thus, depth of fines range from 0 to approximately 3 feet in these areas.



Photograph 8: Little Calumet River, looking east from underneath Halsted Street Bridge.

Calumet-Sag Channel. (Photograph 9) A man-made channel, completed in 1922 to reverse the flow of the Calumet River, the CSC is 16.2 miles long with a generally trapezoidal shape, 225 feet wide and approximately 10 feet deep. In some sections, the north bank is a vertical wall. The alignment is generally straight with three bends near Western, Crawford, and Ridgeland Avenues, and thus there is no riffle, run, or pool development. The channel was excavated through limestone and bedrock, so current conditions constitute mostly silt and sludge deposited on a hard consolidated substrate. Near its eastern terminus, sediments from Ashland Avenue are mostly silt with depth of fines from 1-2 feet. Logjams and boulders are found on the bank, and there is no aquatic vegetation other than attached green algae. In its mid-section, sediment at Cicero Avenue is mostly comprised of sludge and silt, with depths of fines ranging from 3-9 feet. There is an open canopy with logs and boulders on the side bank.

Upstream of Southwest Highway, land use is generally urban industrial, however, near its western terminus, shortly upstream of the confluence with the CSSC, land is leased to and managed by the Forest Preserve District of Cook County. Substrate at Route 83 is mostly comprised of silt and sludge, with a depth of fines of 1-7 feet. In this reach, some parts of the south bank have boulders and small rock ledge, while the north bank is vertical limestone wall.



Photograph 9: The Calumet-Sag Channel, east from 104th Street Bridge.

Use Classification

General Use Waters. This use classification has been designated by the Illinois Pollution Control Board (IPCB) for the 1.6 mile length of the Chicago River and the 4.0 mile reach of the NSC from the North Side WRP outfall to the WPS. The General Use standards are found at 35 Illinois Administrative Code (IAC) Section 202.200 and are established to protect aquatic life, wildlife, body-contact recreation (swimming), water supply, and Secondary Contact uses.

Secondary Contact Waters. All other portions of the CWS have been designated by the IPCB for this use classification. The Secondary Contact standards are found at 35 IAC Section 302.400 and are established to protect indigenous species, non-contact recreation (boating), and commercial navigation.

Facility Descriptions

Chicago River Controlling Works. The CRCW controls the flow of water between the lake and Chicago River. This facility was built by the District in 1938 and was maintained and operated by them until 1984. In this year, the maintenance and operation responsibilities were transferred to the USACE. It consists of walls separating the river and the lake, a navigation lock, two sets of sluice gates, and a pumping station. The lock is 80 feet wide by 600 feet long, with a normal lift of 2.0 feet in size. The two sets of underwater sluice gates consist of four gates each, each gate being 10- by 10-feet in size. The sluice gates allow gravity flow from Lake Michigan to the Chicago River when the lake level is higher than the Chicago River. The pumping station has three pumps of 30 cfs each. The pumps can only discharge from the river to the lake and were installed in 2000 for the purpose of returning excess leakage and lockage water to the lake. The pumps have yet to be used for this purpose.

Lockport Controlling Works. The LCW is owned and operated by the District. It is an auxiliary facility used during storm operations to discharge flood waters to the Des Plaines River. It is located two miles upstream of the LP&L and is used when discharge above the capacity of the LP&L is needed. It has seven sluice gates, each being 30 feet wide and 20 feet high. The gate sill is at elevation -15.0 feet, CCD.

Lockport Powerhouse and Lock. The powerhouse is owned and operated by the District. It was built in 1907 and is currently licensed for two hydroelectric generating units with a total capacity of 13,500 kilowatts, nine submerged sluice gates for the discharge of storm water and one surface sluice gate for flushing debris. The lock is owned and operated by the USACE and was built in 1933. It is 110 feet wide and 600 feet long with a normal lift of 37 feet.

Newly licensed generating units have a combined capacity of 5,000 cfs. Each submerged sluice gate is capable of a maximum discharge of 2,500 cfs. A fill or empty event for the lock during normal water levels causes a discharge of 2,000 cfs over a 20-minute period. During storm operations, the discharge capacity through the facility is increased to facilitate the drainage of stormwater. This lowers the upstream water level and increases water velocities in the channel.

O'Brien Lock and Dam. This facility was built in 1960 and is owned and operated by the USACE. The lock is 110 feet wide and 1,000 feet long with a normal lift of 2.0 feet. Flow regulation from Lake Michigan to the Calumet River is accomplished with four submerged sluice gates, each 10- by 10-feet in size. The gate opening for flow regulation is under the direction of the District and the actual operation is performed by the USACE.

Wilmette Pumping Station. The WPS is located beneath, and is integral with, the Sheridan Road Bridge and controls the flow of water between Lake Michigan and the NSC. It was built in 1910 and is owned and operated by the District. Lake water is brought into the channel for augmenting low flows for water quality maintenance. The station has four horizontal screw pumps rated at 250 cfs at a lift of 3.0 feet. The pump propellers are 9.0 feet in diameter and located in tunnels that run under the floor of the station from the Wilmette Harbor to the channel. Pumping is necessary when lake levels are low.

Adjacent to the south side of the pumping station is a concrete channel and sluice gate to allow for the passage of water by gravity when pumping is not necessary (when the lake level is higher than the level in the NSC). The channel is 30 feet wide and 11 feet deep. During storm operations, when the channel surcharges and the water level nears 5.0 feet, CCD, the sluice gate can be opened to relieve the channel to the lake.

Five temporary pumps with an aggregate capacity of 50 cfs were installed in 2000 due to non-operation of the large original pumps. In 2002, one of the original pumps was rehabilitated for use since the five temporary pumps have insufficient capacity for water quality maintenance.

Instream and Sidestream Elevated Pool Aeration Stations. Instream aeration stations are located on the North Shore Channel at Devon Avenue and on the North Branch Chicago River at Webster Avenue. The Devon and Webster Avenue stations have been in service since 1979 and 1980, respectively. These facilities are operated as needed by the District to maintain dissolved oxygen in the northern Chicago River System.

The sidestream elevated pool aeration (SEPA) stations are owned and operated by the District. There are three SEPA stations on the CSC, and one each on the Little Calumet and Calumet Rivers. Water from the channel is lifted 12- to 15-feet and allowed to drop over a series of weirs to create a waterfall and add oxygen to the waterway. SEPA stations have been operating since 1994 to help overcome dissolved oxygen sags in the Calumet River System. These stations are not operated in the winter months.

Operation Plan

Dry Weather Conditions. Dry weather conditions are typically characterized by flat water levels, below average flows from the WRPs, normal intake from the lake, and a flow of approximately 1,800 cfs through the LP&L. Normal dry weather discharge is released from the CWS through hydroelectric generating units and the navigation lock at the LP&L. The water level in the Chicago River at the CRCW and in the LCR at the OL&D is ideally maintained at -2.0 feet, CCD. Discretionary diversion is brought into the CWS at the CRCW, OL&D, and WPS per the planned schedule.

Wet Weather Conditions. When weather forecasts indicate that rainfall is likely to occur, the CWS is readied for wet weather operations. Discretionary diversion, if in progress, is curtailed and discharge at the LP&L is increased. This lowers the water level in the lower reaches of the CWS to provide storage for incoming storm flow and increases the hydraulic gradient to move more water through and out of the CWS. If no or very light rainfall occurs, the operations are returned to the dry weather mode. Light rainfall, less than 0.33 inches, normally causes little disruption in operations.

If rainfall is moderate, 0.33 to 0.67 inches, most CSOs are initially captured by the Tunnel and Reservoir Plan (TARP) and only reach the CWS through increased discharge from the WRPs. However, direct inflow of other storm runoff does occur under these conditions. Additional discharge at the LP&L is achieved by increasing the discharge through the LP&L's two generating units to their maximum capacity. Discharge necessary beyond the maximum discharge of the generating units (5,000 cfs) is put thorough sluice pit gates at the LP&L and, if necessary, the LCW. Water levels in the upper part of the CWS will rise due to storm inflow and increased WRP discharge. After the peak water level is reached, the water levels begin to subside. Discharge at the LP&L is gradually reduced by closing gates as the CWS returns to dry weather conditions. When -2.0 feet, CCD, is reached at the CRCW and/or OL&D, discretionary diversion is resumed, if appropriate.

If rainfall is heavy, 0.67 to 1.5 inches, TARP will fill and excess CSOs will be discharged to the CWS from pumping stations and CSO outfalls. Other storm runoff from tributary watersheds and storm sewers is significant and imposes an additional hydraulic load on the CWS. The operation of the CWS will be similar to the above description, with the exception that increased discharges at the LP&L are initiated more rapidly.

Excessive rainfall, 1.5 inches or greater, especially if preceded by antecedent rainfall, will likely cause extreme water levels in the upper part of the CWS. If water levels reach 3.5 feet, CCD, at the CRCW and the OL&D and are rising, it will be necessary to relieve the CWS by discharging excess flood water to Lake Michigan at those points. If the water level at WPS reaches 4.5 to 5.0 feet, CCD, it is necessary to relieve the CWS at the WPS. The decision to provide for such relief at each facility is made based on the potential for continued area rainfall and on the water level conditions at each facility.

Measurement of Discharge and Water Level

United States Geological Survey. The USGS maintains discharge measurement stations at several locations in the CWS and its tributaries. These are summarized in the following table. Water level is also available at these locations.

River	Location	Number
Chicago River	Columbus Drive	05536123
Chicago Sanitary & Ship Canal	Romeoville Road	05536995
Grand Calumet River (T)	Hohman Avenue	05536357 (Indiana)
Little Calumet River	O'Brien Lock & Dam	05536357
Little Calumet River (T)	Cottage Grove Avenue	05536290
Midlothian Creek (T)	Kilbourn Avenue	05536340
North Branch (T)	Albany Avenue	05536105
North Shore Channel	Maple Street	05536101
Tinley Creek (T)	135th Street	05536500

All locations in Illinois, except as indicated. Tributary streams are designated (T).

Metropolitan Water Reclamation District of Greater Chicago. The District maintains a network of rain gauges in the watershed and nine water level measurement stations on the CWS. See the CWS List for water level measurement locations.

Monitoring of Water Quality

Illinois Environmental Protection Agency. IEPA operates an Ambient Water Quality Monitoring (AWQM) Program throughout Illinois with over 200 monitoring locations. Two of these are located on the CWS, on the CSC at Route 83 and the CSSC at Lockport.

Metropolitan Water Reclamation District of Greater Chicago. The District also operates an AWQM Program and has 20 locations on the CWS. In addition, District performs monitoring for biological conditions, physical habitat, and sediment quality at all these locations. At some locations, the monitoring is performed annually and at other, once in four years. In addition, there are 30 locations in the CWS where dissolved oxygen and temperature are measured hourly with continuous in-situ monitors. See the CWS List.

United States Environmental Protection Agency. USEPA performs no regular monitoring, but has conducted surveys of sediment quality for some reaches of the CWS.

United States Army Corps of Engineers. USACE performs no regular monitoring, but has conducted surveys of sediment quality for some reaches of the CWS.

ACRYONYM LIST

AWQM	Ambient Water Quality Monitoring
CCD	Chicago City Datum
CFR	Code of Federal Regulations
cfs	Cubic feet per second
CRCW	Chicago River Controlling Works
CSC	Calumet-Sag Channel
CSO	Combined sewer overflow
CSSC	Chicago Sanitary and Ship Canal
CWS	Chicago Waterway System
District	Metropolitan Water Reclamation District of Greater Chicago
DWR	Illinois Department of Natural Resources, Division of Water Resources
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
IPCB	Illinois Pollution Control Board
LCR	Little Calumet River
LCW	Lockport Controlling Works
LP&L	Lockport Powerhouse and Lock
MGD	Million Gallons per Day
NBC	North Branch Canal
NPDES	National Pollutant Discharge Elimination System
NSC	North Shore Channel
OL&D	O'Brien Lock and Dam
RAPS	Racine Avenue Pumping Station
SEPA	Sidestream Elevated Pool Aeration
TARP	Tunnel and Reservoir Plan
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WPS	Wilmette Pumping Station
WRP	Water Reclamation Plant
WY	Water Year (October 1 through September 30)

CHICAGO WATERWAY SYSTEM
LISTING OF FACILITY INFLOW AND MONITORING LOCATIONS

Location	USGS River Mile	Distance U/S of Lockport	Comments
CHICAGO SANITARY & SHIP CANAL			
Des Plaines River Confluence	290.1	-1.1	
Lockport Powerhouse & Lock	291.1	0.0	Flow District WL, WQ, DO
Lockport Controlling Works	293.2	2.1	District WL
Will County Power Plant, Cooling Water	296.0	4.9	OU, IN
Romeoville Road	296.2	5.1	USGS DM
Citgo Petroleum Corporation	298.0	6.9	
Stephens Street	300.5	9.4	District WQ
Lemont Water Reclamation Plant	300.6	9.5	IN
Argonne Laboratory	302.3	11.2	USGS, DM, OU, IN
Illinois and Michigan Canal Connector Ditch	303.0	11.9	IN
Sag Junction	303.4	12.3	Confluence
Highway 83	304.1	13.0	District WQ, DO
Baltimore & Ohio Railroad	312.3	21.2	District DO
Summit-Lyons Conduit Inflow	313.3	22.2	IN
Harlem Avenue	314.0	22.9	District WQ
Stickney Water Reclamation Plant	315.5	24.4	IN
Cicero Avenue	317.3	26.2	District WQ, DO
Crawford Power Plant, Cooling Water	318.5	27.4	OU, IN
Western Avenue	320.6	29.5	District WL
SOUTH BRANCH			
Damen Avenue	321.1	30.0	
South Fork	321.7	30.6	Confluence
Loomis Street	321.9	30.8	District DO, WQ
Fisk Power Plant, Cooling Water	322.0	30.9	OU, IN
Jackson Boulevard	325.0	33.9	
Madison Street	325.3	34.2	District WQ
North Branch & Chicago River Junction	325.6	34.5	Confluence
SOUTH FORK			
Interstate Route 55	321.9	30.8	District DO, WQ
36th Street	322.5	31.4	District DO
Racine Avenue Pumping Station	322.8	31.7	CSO
NORTH BRANCH			
Kinzie Street	325.8	34.7	District DO
Grand Avenue	326.0	34.9	District WQ
Division Street	327.3	36.2	District
Webster Avenue Instream Aeration Station	238.9	37.8	SA
Fullerton Avenue	329.4	38.3	District DO
Diversey Parkway	330.1	39.0	District WQ
Addison Street	331.3	40.2	District DO
Wilson Avenue	332.6	41.5	District WQ
Lawrence Avenue	332.9	41.8	District WL
North Branch Pump Station	333.1	42.0	CSO
North Branch Dam	333.3	42.2	Tributary IN

CHICAGO WATERWAY SYSTEM
LISTING OF FACILITY INFLOW AND MONITORING LOCATIONS (Continued)

Location	USGS River Mile	Distance U/S of Lockport	Comments
NORTH SHORE CHANNEL			
Foster Avenue	333.5	42.4	District WQ, DO
Devon Avenue Instream Aeration Station	335.0	43.9	SA
Devon Avenue	335.0	43.9	District
Touhy Avenue	336.0	44.9	District WQ
North Side Water Reclamation Plant	336.9	45.8	IN
Oakton Street	337.0	45.9	District WQ
Main Street	337.5	46.4	District DO
Simpson Street	339.5	48.4	
Central Street	340.2	49.1	District WQ
Maple Avenue	340.6	49.5	USGS DM
Linden Street	340.8	49.7	
Sheridan Road (Wilmette Pumping Station)	341.0	49.9	District WL, IN
CHICAGO RIVER			
North and South Branch Junction	325.6	34.5	
Wells Street	325.8	34.7	District WQ
Clark Street	325.9	34.8	District DO
Michigan Avenue	326.4	35.3	
Columbus Drive	326.6	35.5	USGS DM, WL
Lake Shore Drive	326.9	35.8	District WQ
Chicago River Controlling Works	327.1	36.0	District WL
SOUTH FORK			
South Branch Junction	321.7	30.6	Confluence
Archer Avenue	322.1	31.0	District DO, WQ
Racine Avenue Pumping Station	323.0	31.9	CSO
CALUMET-SAG CHANNEL			
Sag Junction	303.4	12.3	Confluence
SEPA Station No. 5 at Junction	303.4	12.3	SA
Illinois and Michigan Canal	303.7	12.6	IN
Highway 83	304.3	13.2	District WQ, DO
104th Street	307.5	16.4	District DO
Crooked Creek	308.1	17.0	IN
Mill Creek	309.0	17.9	IN
Stony Creek (West)	309.4	18.3	IN
Southwest Highway	310.7	19.6	District WL
SEPA Station No. 4	311.7	20.6	SA
Harlem Avenue	311.7	20.6	
Navajo Creek	312.6	21.5	IN
Tinley Creek	314.1	23.0	IN
Cicero Avenue	315.0	23.9	District WQ, DO
Midlothian Creek	317.1	26.0	IN
Kedzie Avenue	317.1	26.0	
Stony Creek (East)	317.9	26.8	IN

CHICAGO WATERWAY SYSTEM
LISTING OF FACILITY INFLOW AND MONITORING LOCATIONS (Continued)

Location	USGS River Mile	Distance U/S of Lockport	Comments
SEPA Station No. 3	318.0	26.9	SA
Division Street	318.0	27.5	
Ashland Avenue	319.1	28.0	District WQ
Little Calumet River Junction	319.6	28.5	Tributary IN
Little Calumet River			
Halsted Street	320.1	29.0	District WQ, DO
SEPA Station No. 2	321.3	30.2	SA
Calumet Water Reclamation Plant	321.4	30.3	IN
125th Street Pump Station	321.4	30.3	CSO
Indiana Avenue	322.4	31.3	District WQ
C & WI Railroad	322.6	31.5	District WQ
Conrail Railroad	325.4	34.3	
Grand Calumet River	325.7	34.6	IN
O'Brien Lock and Dam	326.5	35.4	USGS DM District WL

WL=water level measurement.
WQ=water quality sampling location.
DM=discharge measurement location.
OU=outflow.
IN=inflow.
CSO=combined sewer overflow pumped inflow during storms.
DO=continuous dissolved oxygen monitoring location.
SA=supplemental aeration.
District=Metropolitan Water Reclamation District of Greater Chicago.
USGS=United States Geological Survey.

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May 6, 2005

Docket Management Facility (USCG-2004-19842)
U.S. Department of Transportation, Room PL-401
400 Seventh Street S.W.
Washington, D.C. 20590-0001

RE: USCG-2004-19842 Ballast Water Management for Vessels Entering the Great Lakes that Declare No Ballast Onboard

Dear Sir or Madam:

Thank you for the opportunity to comment on ballast water management for vessels entering the Great Lakes declaring no ballast on board (NOBOB), as published in the January 7, 2005 issue of the Federal Register (Vol. 70, No. 5). The Council of Great Lakes Governors strongly urges you to adopt strict, mandatory regulations for these vessels to protect the Great Lakes, one of our national treasures.

The Great Lakes Governors have collectively been addressing the persistent threat of aquatic invasive species (AIS) through the Council's Aquatic Invasive Species Task Force since 2001. The Task Force coordinates State efforts to combat AIS through advocacy, coordination and the identification of best practices. The Task Force has spearheaded efforts to build regional support for a consistent federal strategy to combat AIS. Ensuring mandatory regulations that prevent all AIS introductions through ballast water, including water released from NOBOB vessels, is a key objective.

The Great Lakes Governors have developed nine priorities to protect and restore the Great Lakes. These priorities, including the urgent priority of stopping the introduction and spread of AIS, have been adopted by the Great Lakes Commission and the Great Lakes Cities Initiative. They are also being used as the organizing principle for the Great Lakes Regional Collaboration which resulted from President Bush's May 18, 2004 Executive Order establishing the Great Lakes Interagency Task Force. There is clearly broad-based support for working together to address this critical issue.

Stopping the introduction and spread of AIS is perhaps the most urgent of the Great Lakes Governors' nine priorities for regional restoration and protection. Recently, the Governors took action in response to the imminent threat posed by the Asian carp, an AIS approaching the Great Lakes through the Chicago Sanitary and Ship Canal. In an unprecedented example of regional cooperation, the Great Lakes Governors contributed an additional $475,000 in funds to complete the construction of a permanent dispersal barrier to help prevent Asian

carp from entering the Great Lakes. This contribution supplemented $1.8 million from the State of Illinois and $6.825 million from the federal government.

AIS introductions have had enormous ecological and economic consequences for our region. The Great Lakes have been stricken by sea lampreys, zebra mussels, round gobies and many other invading species. Cost estimates related to AIS impacts range well into billions of dollars annually. Among other impacts, AIS threatens the Great Lakes sport and commercial fishing industry, which alone is valued at nearly $4.5 billion annually and supports 81,000 jobs. The impacts are real, affecting a major share of our nation's industrial output and threatening the well-being of 25 million Americans who depend directly on the Great Lakes for water, recreation and food. While waterborne transportation is an important element of the Great Lakes economy, steps must be taken to ensure that any associated environmental and economic risks are effectively addressed.

Because AIS are difficult to control, and almost impossible to eradicate once established, preventing their introduction must be the primary focus of management strategies. While ballast water introductions are the primary vector for AIS introductions, the majority of vessels entering the Great Lakes declare no ballast on board. Although these vessels have no pumpable water in their ballast tanks, they contain a substantial volume of residual water and sediments that can harbor AIS. When these vessels unload cargo, ballast water is pumped aboard to compensate for the lost cargo weight and mixes with the residual ballast material. Therefore, without strict management requirements for these vessels, AIS can be discharged into the Great Lakes through routine loading and unloading operations. In the Great Lakes, ballast operations may take place several times during a single ship transit, resulting in several opportunities to discharge harmful AIS into the Lakes. Thus, mandatory management practices for these vessels are critical to the overall effort to prevent AIS introductions.

While technology continues to emerge, the U.S. Coast Guard (USCG) must make enacting mandatory regulations for NOBOB vessels an immediate priority. Mandatory regulations will encourage the development of technology and help achieve the goal of zero discharge of living organisms from vessels entering the Great Lakes as soon as possible. We encourage the USCG to expedite working with shipping and research interests to develop effective technology and practices for ballast water management in NOBOB vessels as a central priority.

In summary, the Council of Great Lakes Governors recommends a NOBOB ballast water management plan that:

1.) Establishes a strict mandatory standard for controlling operations that result in the discharge of any water or materials from ballast tanks into the Great Lakes with the goal of achieving zero discharge of living organisms as soon as possible;
2.) Requires vessels to employ an effective treatment protocol before discharging any water or materials from ballast tanks if NOBOB vessels cannot safely flush their ballast tanks in the open seas; and,
3.) Strictly enforces compliance by vessels entering the Great Lakes declaring NOBOB status.

The USCG is on the front line of this battle. We encourage you to provide the strong leadership necessary in the fight against AIS by exercising your full authority to limit introductions and spread of AIS. Enacting mandatory ballast water management practices for NOBOB vessels is a critical and necessary step to protect the ecological integrity and economic future of the Great Lakes region.

The Great Lakes Governors recognize the importance of regional collaboration. We urge you to consider the comments of the individual Great Lakes States, as well as those submitted by the Great Lakes Commission as you develop management guidelines for NOBOB vessels.

The Council's AIS Task Force continues to examine this issue of critical importance and will provide oral comments at your public meeting in Cleveland on May 9. Meanwhile, please do not hesitate to contact Dave Naftzger, Executive Director of the Council, at 312-407-0177 with questions.

Sincerely,

Jim Doyle
Council Co-Chair
Governor of Wisconsin

Bob Taft
Council Co-Chair
Governor of Ohio

For Immediate Release
October 7, 2004

Contact: **David Naftzger**
312-407-0177
dnaftzger@cglg.org

Great Lakes Governors Applaud Congressional Action to Help Keep Asian Carp Out of the Great Lakes Basin
"By working together as a region, we can do great things for the Great Lakes."

Chicago, Ill. (October 7, 2004) – Capping months of State-Federal efforts, the Governors of the eight Great Lakes States today applauded the United States Congress for joining them in supporting an effort to prevent introduction of giant Asian carp and other aquatic invasive species into the waters of the Great Lakes Basin. The Governors in particular applauded Members of the Great Lakes Congressional Delegation and U.S. EPA Administrator Mike Leavitt, as chair of the Great Lakes Interagency Task Force, for spearheading the legislative effort.

The U.S. House of Representatives and U.S. Senate voted on Wednesday to authorize a total of $6,825,000 for the U.S. Army Corps of Engineers to construct an electric dispersal barrier in the Chicago Sanitary and Ship Canal. The barrier will create an electric field to prevent Asian carp from moving through the canal, into Lake Michigan and throughout the entire Great Lakes Basin. The project's total cost, to be shared by State and Federal governments, is estimated at $9.1 million.

Stopping the introduction and spread of non-native aquatic invasive species is one of the Great Lakes Governors' nine shared priorities for Great Lakes restoration and protection. "The coordinated State and Federal efforts that have been extended to protect the Lakes from the Asian carp are an example of regional cooperation that can further our shared agenda for protecting and restoring this national treasure," said Governor Bob Taft of Ohio, co-chair of the Council of Great Lakes Governors.

"Members of Congress have joined us in recognizing the grave threat posed by invasive species such as Asian carp, which could lead to overwhelming economic and ecological losses for the Great Lakes States," said Governor Taft. The Great Lakes States are prepared to contribute up to $575,000 in additional funds toward costs for the barrier, he said.

"By working together as a region, we can do great things for the Great Lakes," said Governor Jim Doyle of Wisconsin, co-chair of the Council of Great Lakes Governors. He added, "It is through a joint effort of the Great Lakes Governors, the Great Lakes Congressional Delegation, and with the support of the Administration that we have been able to achieve our goals."

Taft and Doyle also called for increased federal funding through reauthorization of the National Aquatic Invasive Species Act (NAISA) to focus on preventative measures that

preclude the movement of Asian carp and other aquatic invasive species to and from the Great Lakes.

Asian carp, the most recent in a series of aquatic invasive species to threaten the Great Lakes ecosystem, are large, voracious fish imported into the Mississippi River Valley in the 1960s as a means of cleaning vegetation and snails from commercial fish-farming ponds. Carp that escaped these ponds during floods have migrated up the Mississippi River and into the Chicago Sanitary and Ship Canal, coming within a few miles of Lake Michigan and, potentially, into all the waters of the Great Lakes Basin. A temporary electric barrier was built in the canal several years ago as a demonstration project and has proven effective, but it must soon be replaced with a permanent carp-control system to ensure continuous protection.

Aquatic invasive species are non-native fish and aquatic animals that are accidentally or deliberately introduced into the Great Lakes, often from the ballast water of ships entering the lakes from overseas ports. Examples of such species that have entered the Great Lakes in recent years include the zebra mussel, round goby and sea lamprey.

# # #

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January 11, 2006

Dear Member of the Great Lakes Congressional Delegation:

As you know, the Great Lakes are in imminent danger of invasion by Asian carp. Without the completion and operation of an effective barrier system now under construction in the Chicago Sanitary and Ship Canal, this aquatic invasive species may soon enter the Lakes. This threatens an enormous and irreparable ecological tragedy for the world's largest fresh water system and for the millions of Americans who depend on the health of those waters.

Last year, the federal government fell short on funding the barrier because of cost overruns and construction delays. The project was slated to be completed only after the Council of Great Lakes Governors and member States stepped forward with an additional $575,000 to finish the project.

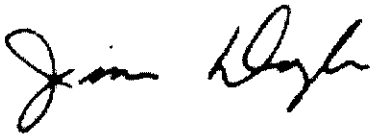
Now, additional construction delays and a shortage of funding again threaten the success of the barrier. The U.S. Army Corps of Engineers has indicated that construction on the permanent barrier is not expected to be completed until spring, and may have additional cost overruns. Regardless, Corps funding for the barrier system (including the existing, "temporary barrier") is scheduled to run out in May 2006 and no further federal funds to date have been committed for this important barrier.

Clearly, the barrier system is a federal responsibility, as the barrier is intended to protect not only the Illinois portion of Lake Michigan, but the rest of the Great Lakes and their tributaries as well. Additionally, the barrier system will protect the Mississippi River Basin from Great Lakes invasive species such as the Eurasian ruffe. Illinois and the other Great Lakes States have already contributed substantial non-federal funds toward construction of the barrier. It is the responsibility of Congress and the Administration to ensure that funds exist to finish barrier construction and to keep the barrier system operating in order to protect not just one State, but the entire region and the nationally important economy and unique ecosystem that the Great Lakes support.

We call upon you and your colleagues to join us in this important fight by quickly passing the necessary authorization and then ensuring sufficient funds are available for construction completion, as well as maintenance and operation after May 2006, through reprogramming, supplemental appropriations or other means. Additionally, we request that you authorize and appropriate $5 million for construction to replace the current

temporary barrier with a permanent barrier in FY07, along with $1 million annually to maintain and operate the barriers as a system. Please call David Naftzger, Executive Director of the Council of Great Lakes Governors, at 312-407-0177 if there are questions in this regard.

Sincerely,



Jim Doyle
Governor, State of Wisconsin
Chair,
Council of Great Lakes Governors

CC: The Honorable James M. Inhofe
The Honorable James M. Jeffords
The Honorable Don Young
The Honorable James Oberstar
The Honorable Jerry Lewis
The Honorable David R. Obey

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March 1, 2007

The Honorable Judy Biggert
1034 Longworth House Office Building
Washington, DC 20515

Dear Representative Biggert:

On behalf of the Council of Great Lakes Governors, I would like to thank you for sponsoring H.R. 553 and assisting us in the effort to prevent the introduction of the Asian carp into the Great Lakes Basin.

As you know, stopping the introduction and spread of non-native aquatic invasive species is one of the Great Lakes Governors' shared priorities for Great Lakes restoration and protection. Invasive species such as the Asian carp pose a grave threat to our region, and can lead to overwhelming economic and ecological losses for the Great Lakes States and our nation. Without the completion and operation of an effective barrier system in the Chicago Sanitary and Ship Canal, the Asian carp may soon enter the Lakes, causing numerous injuries to recreational boaters and out-competing native species for food and habitat, creating an enormous public safety threat and an irreparable ecological tragedy for the world's largest freshwater system. In addition, the barrier provides protection of the entire Mississippi River Basin from invasive fish in the Great Lakes.

We strongly support legislation authorizing and appropriating Federal funds that would accomplish the following:

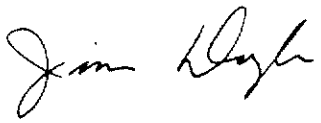
- Complete full construction on a permanent dispersal barrier as designed and recommended by the Barrier Advisory Panel.
- Upgrade and make permanent the original demonstration barrier.
- Ensure long term Federal funding and operation of both barriers as a system, and,
- Credit the States for their contributions to this project.

Because the Chicago Sanitary and Ship Canal is a Federal navigation waterway, it is the responsibility of Congress and the Federal government to ensure that funds exist to protect our entire region and, in particular, the nationally important economy and ecosystem that the Great Lakes support. As you know, the Great Lakes States have made significant financial contributions towards the completion of this project. The State of Illinois has contributed $1.8 million to date. In addition, when construction was delayed due to Federal funding shortfalls, the other seven Great Lakes States

contributed an additional $475,000. We thank you for recognizing these contributions and for seeking to reimburse the States.

We applaud your leadership towards protecting the Lakes from all species of Asian carp and other invasive species and look forward to continuing to work with you to protect and restore the Great Lakes. Please do not hesitate to contact David Naftzger, Executive Director of the Council of Great Lakes Governors, if there are questions.

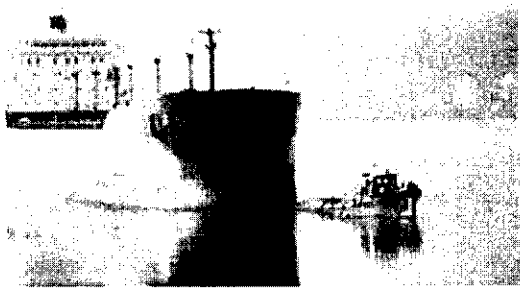
Sincerely,

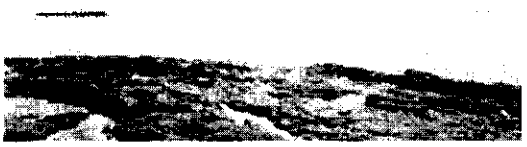


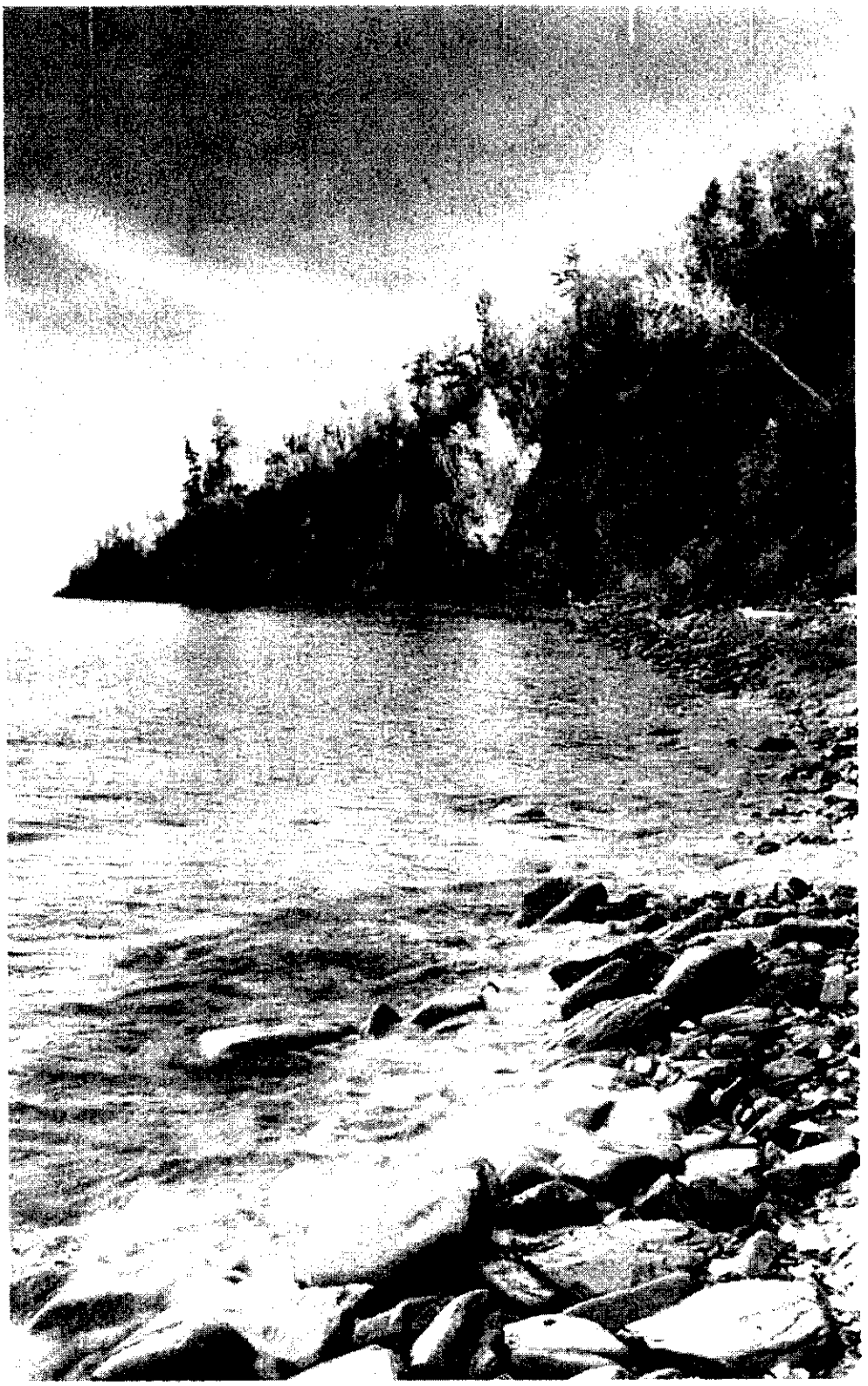
Jim Doyle
Governor of Wisconsin
Chair, Council of Great Lakes Governors

Great Lakes
Commission
des Grands Lacs

2006 Annual Report







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From Many Views,

One Vision

The work of the Great Lakes Commission is greatly influenced by major regional initiatives now underway to address the challenges facing the Great Lakes. To a large extent, these play a major role in defining the regional agenda and outlining the issues to be addressed by the Commission and its partners. Among them:

"The Great Lakes form a single, interconnected watershed. Most of the challenges to their ecology do not respect national boundaries and, therefore, must be addressed by taking an ecosystem approach." - *Dennis Schornack, Chair, U.S. Section International Joint Commission*

Major Regional Initiatives

Great Lakes Regional Collaboration

The recommendations of the Great Lakes Regional Collaboration were hailed at their release in December 2005 as offering a comprehensive strategy for the restoration and protection of the Great Lakes. However, with the notable exception of the reauthorization of the Great Lakes Fish and Wildlife Restoration Act, few elements of the strategy were enacted in 2006. With the Great Lakes Congressional Delegation gaining significant clout at the committee level in the new Congress, prospects for Regional Collaboration legislation may be more favorable in 2007 and the Commission and its partners will be working diligently to secure passage of those bills.

Aquatic Invasive Species

Aquatic Invasive Species (AIS) represent one of the greatest and most difficult challenges facing the Great Lakes. The Chicago Sanitary and Ship Canal dispersal barrier, designed to protect the Great Lakes from Asian carp and other invaders, has been a top regional priority for most of this decade. However, the enabling legislation has been caught up in the reauthorization of the Water Resources Development Act, which has stalled in the past several sessions of Congress. The Commission will be strongly supporting stand alone legislation in 2007 to authorize and fund the barrier. More recently, the Great Ships Initiative, a $3.5 million research effort to develop effective ballast water treatments to prevent the introduction and spread of AIS, was initiated in July 2006. The project is co-managed by the Northeast-Midwest Institute and the National Fish and Wildlife Foundation, with research based at the University of Wisconsin-Superior's Lake Superior Research Institute.

Great Lakes Water Management

Efforts to develop new and more effective regional agreements to cooperatively manage the waters of the Great Lakes and preserve and protect them for future generations bore fruit with the adoption of the Annex 2001 Implementing Agreements in December 2005. Enabling legislation has been introduced in some Great Lakes state and provincial legislatures; the Commission has called upon all Member states and provinces, as well as the U.S. Congress, to enact the necessary legislation to put them into effect.

Great Lakes Water Quality Agreement Review

Last updated in 1987, the U.S.-Canadian Great Lakes Water Quality Agreement provides the framework for binational cooperation on the cleanup and restoration of the Great Lakes. The U.S. Environmental Protection Agency and Environment Canada, in collaboration with the International Joint Commission, are currently reviewing the agreement to determine the need for modifications. A key issue is whether the agreement should focus narrowly on water quality, or evolve into a binational framework for ecosystem management. The two agencies are expected to issue their recommendations in mid-2007.

The Great Lakes represent a single system and natural resource shared by multiple political jurisdictions, namely, the Great Lakes states and provinces. The Commission helps the region speak with a common voice, providing coordination, support and advocacy on issues where there is consensus among its Member jurisdictions. The Commission assists and supports its Members in advocating common positions, and conducts advocacy activities in close coordination with other leading regional, national and international institutions. Examples of 2006 Commission activities supporting this function include the following:

Policy Coordination and Advocacy

"Restoration of the Great Lakes is a national priority. The Regional Collaboration Strategy should be used as more than just a wish list of program changes and funding levels, but as a strategic action plan to guide every agency at every level of government involved in restoration activities." - *U.S. Rep. Vern Ehlers, (R-Mich. 3rd)*

Great Lakes Legislative Priorities

Each year the Commission presents to Congress legislative priorities, reflecting a consensus among its Member states on the greatest needs for the lakes, restoration and protection. These are developed in close coordination with key regional stakeholders, principally the Council of Great Lakes Governors. Taken together, these priorities offer a "blueprint" for federal legislation over the coming year to address essential Great Lakes needs and form the foundation for the Commission's advocacy efforts. Among the significant federal legislative priorities in 2006 were:

- Authorizing and funding the construction and operation of the Asian carp dispersal barriers in the Chicago Sanitary and Ship Canal;
- Passage of the National Aquatic Invasive Species Act;
- Fully funding the Great Lakes Legacy Act to remediate Areas of Concern;
- Reauthorizing the Great Lakes Fish and Wildlife Restoration Act; and,
- Authorizing and funding the Integrated Ocean Observing System and associated Great Lakes monitoring efforts.

See www.glc.org/restore or contact Jon MacDonald Dumer jonmacd@glc.org.

Our Changing Lakes

2007 Annual Report of the Great Lakes Commission

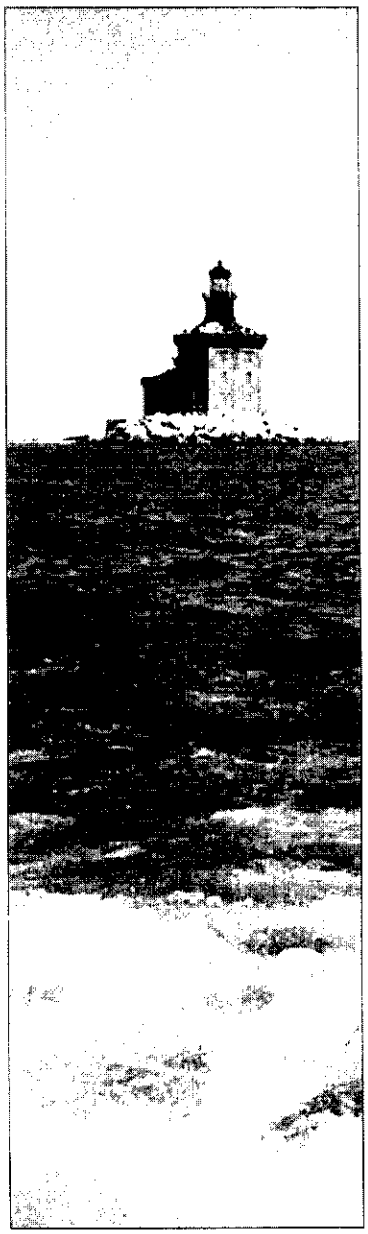
Great Lakes Commission
des Grands Lacs

Great Lakes Legislative Priorities (FY 2008)

On an annual basis, the Great Lakes Commission develops and presents to Congress a set of legislative priorities to protect and enhance the quality of our region's environment and economy. The priorities are developed in coordination with other key regional partners, primarily the Council of Great Lakes Governors. The priorities span a number of key issues in the region and, taken together, provide a "blue print" for Great Lakes restoration and protection. In 2007, the Commission's top priorities focused on stopping the introduction and spread of invasive species and implementing recommendations of the Great Lakes Regional Collaboration, such as reauthorizing and fully funding the Great Lakes Legacy Act and funding efforts to protect Great Lakes wetlands. Advocacy efforts throughout the year focused on priorities such as:

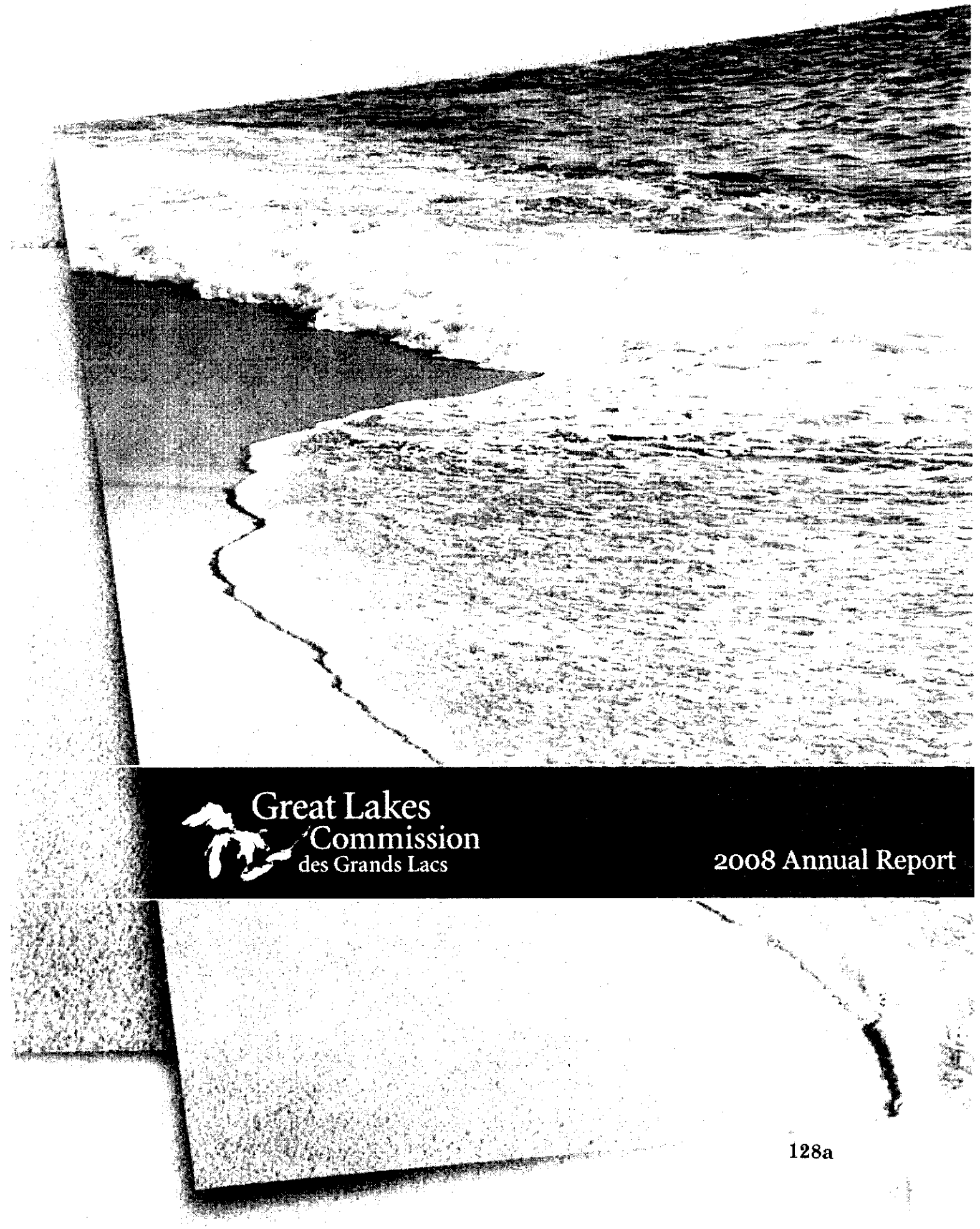
- Authorization and funding for the Aquatic Nuisance Species (ANS) Dispersal Barrier System on the Chicago Sanitary and Ship Canal to prevent the Asian carp and other invasive species from entering the Great Lakes;
- Passage of ballast water legislation to ensure commercial vessels visiting Great Lakes ports meet uniform ballast water discharge requirements that protect the lakes from invasive species; and
- Passage of the Water Resources Development Act (WRDA), which authorizes a number of Great Lakes water and navigation projects consistently supported by the Commission, including a St. Clair River-Lake St. Clair Comprehensive Management Plan; a hydrological study of the St. Clair River; and construction of a second lock at Sault Ste. Marie, Mich.

The region saw progress on each of these priorities, most notably the passage of the Water Resources Development Act in November. In addition to authorizing the Great Lakes programs noted above, WRDA also provided the authorization for the ANS dispersal barrier. This authorization was accompanied by $9.1 million in funding for the barrier for FY 2008. While legislation to regulate ballast water was not passed this year, significant progress has been made and the region will be targeting this issue in 2008. See www.glc.org/restore or contact: Matt Doss, mdoss@glc.org.



Great Lakes Day in Washington

Each year, the Great Lakes Commission works with key regional partners to unveil the region's legislative priorities to Congress through Great Lakes Day. The combined efforts of the Great Lakes Commission and regional partners led to a successful Great Lakes Day 2007 on March 7. For the first time, the region spoke in a unified voice as we presented a set of critical, near-term priority actions to Congress. The document "Great Lakes Restoration: Five Lakes — One Voice" outlined specific requests to stop aquatic invasive species, clean up toxic sediments, restore Great Lakes wetlands, protect water quality, and enact Great Lakes restoration legislation. A number of regional organizations signed on to support the requests, which were consistent with the priorities of the governors of the Great Lakes states, endorsed by the mayors of the Great Lakes and St. Lawrence Cities Initiative, and reflected recommendations from the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes. See www.glc.org/greatlakesday or contact: Matt Doss, mdoss@glc.org.



Great Lakes Commission
des Grands Lacs

2008 Annual Report

ally in such activities as wastewater systems operation, maintenance and infrastructure, greenspace protection and recycling/reuse programs.

"This report clearly demonstrates that our cities and other communities are ready and willing partners in the protection and restoration of the Great Lakes – St. Lawrence ecosystem," said Michigan Lt. Gov. John Cherry, then-chair of the Great Lakes Commission. "Their contributions at the local level play a key role in the environmental health and well-being of the entire system, and they need and deserve federal support in those efforts."

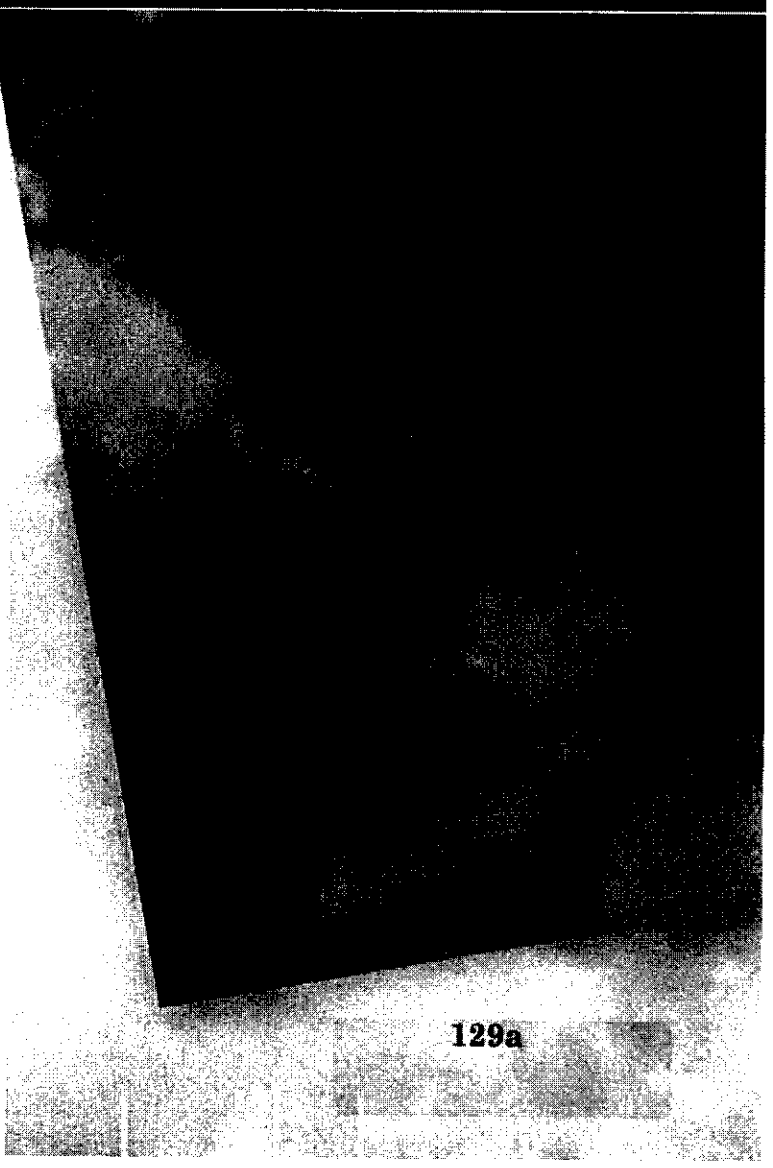
Generating increased federal support for Great Lakes protection and restoration was a key motivation for the cities investment study. To help track this and other legislative advocacy efforts, the Commission developed in 2008 a web-based tool to provide up-to-date information on Great Lakes legislative priorities. The site – part of the Great Lakes Information Network (GLIN) – helps to increase support for Great Lakes protection and restoration by providing easy access to the status of federal legislation and appropriations through a single web site: *www.glin.net/legislativepriorities.*

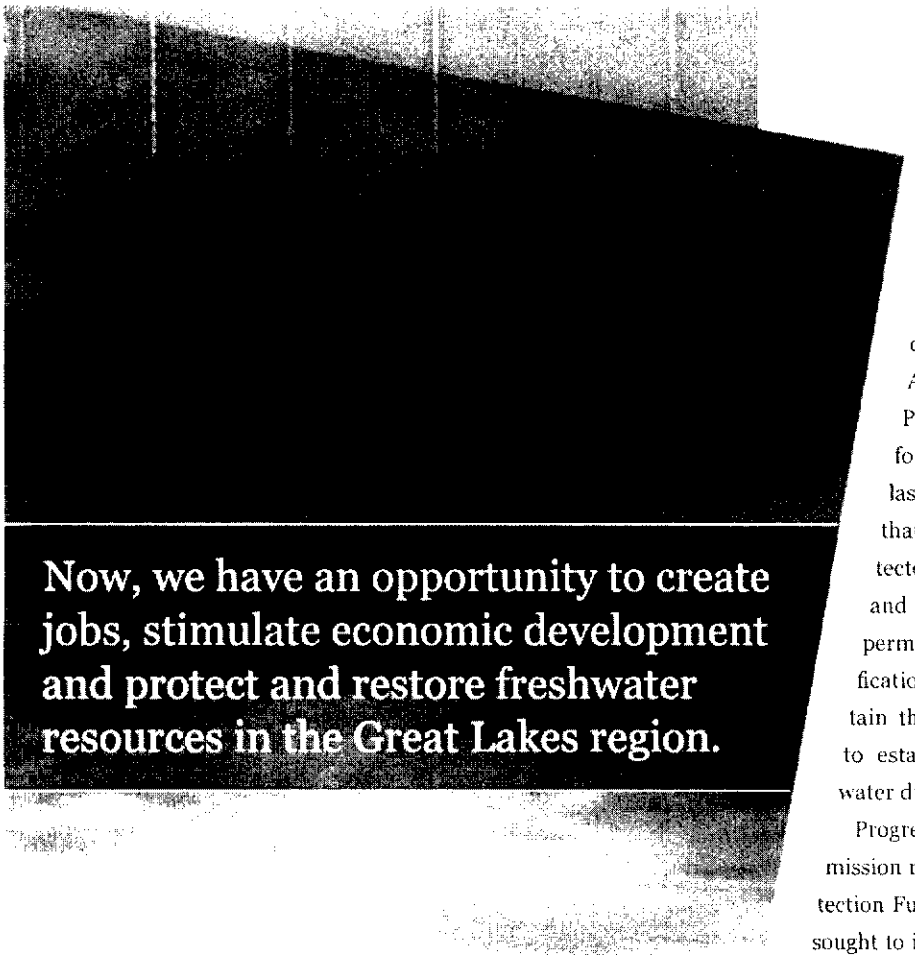
The site offers a searchable database of current legislative priorities, news updates, announcements of hearings and briefings, and information about members of the Great Lakes congressional delegation, including bills they've sponsored, maps of congressional districts and much more. Funded by the Wege Foundation, this project is helping to engage a wide array of audiences in the legislative process through information and education, and promotion of Great Lakes stewardship.

Combating the introduction and spread of aquatic invasive species (AIS) in the Great Lakes continued to be a high priority for the Great Lakes Commission in 2008. The Commission joined with the Great Lakes governors, the mayors of the Great Lakes and St. Lawrence Cities Initiative, Great Lakes-St. Lawrence shipping interests and many other partners to support federal ballast water legislation to protect the Great Lakes from the most prominent AIS vector.

The collective effort came tantalizingly close to success. During the 110th Congress, several bills were introduced to mandate treatment of ballast water from oceangoing vessels. Most significantly, such provisions were included in the House-passed Coast Guard reauthorization bill (H.R.2830), but a

With long-sought resources now at hand, we share the responsibility to use them wisely and effectively.





Now, we have an opportunity to create jobs, stimulate economic development and protect and restore freshwater resources in the Great Lakes region.

companion bill was not approved in the Senate. Also in 2008, the EPA released its Vessel General Permit (VGP) covering discharges from U.S.- and foreign-flagged ships over 79 feet long, including ballast water. Great Lakes states, however, did not believe that the requirements under the VGP adequately protected their waters from ballast-borne invasive species, and thus added more stringent conditions to the EPA permit through the Clean Water Act Section 401 certification process. The Commission continued to maintain that a strong federal approach is critically needed to establish a uniform regulatory program for ballast water discharges.

Progress was made, however, on other AIS fronts: the Commission received a planning grant from the Great Lakes Protection Fund to focus on non-ballast AIS vectors. The project sought to identify and evaluate high-risk commercial and recreation activities and pathways contributing to AIS introduction and spread, including the role of aquaculture, live bait, aquarium and water garden industries, and other high-risk commercial activities. These are generally referred to as "organisms in trade."

Information gained from the project will be used to guide the development of initiatives to reduce the likelihood that invasive species will be introduced or spread through organisms in trade. An advisory committee drawn from representatives of state and federal agencies, commercial interests, researchers, academia and other specialists provided overall project guidance.

In the first joint meeting of its kind, the Great Lakes Panel on Aquatic Nuisance Species, coordinated by the Commission, held a combined session in 2008 with the Mississippi River Basin Panel. A key objective of the meeting, held in Milwaukee, was to provide a forum for communication and collaboration among members of both panels on the shared concerns of these interconnected watersheds.

The meeting focused on common priority issues, such as the transfer of AIS between basins, the recently discovered lethal fish virus viral hemorrhagic septicemia (VHS) and ballast water. Sessions included a 20-year retrospective on lessons learned from the zebra mussel infestation in the Great Lakes, and discussions on the AIS risk presented by commercial and recreational activities other than vessel ballast water.

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Michigan's
Aquatic Nuisance Species
State Management Plan Update
Prevention and Control in Michigan Waters
A cooperative effort of the
Michigan Department of Environmental Quality
Michigan Department of Natural Resources
Michigan Department of Agriculture
In Partnership with other Interested Parties
Prepared by Michigan's Office of the Great Lakes
October 2002

I. Introduction

Michigan's waters are under assault from aquatic nuisance species already here and are threatened by those yet to come. An extraordinary amount of time and money is spent each year to control Eurasian watermilfoil in our beautiful waters and zebra mussels in our municipal and industrial pipes. Many reading this will have cursed the round gobies biting the fish hook instead of the desired perch and other fish. Numerous species are knocking at the door, including Asian carp coming up the Chicago diversion and snakehead fish already found in other states. Aquatic nuisance species are waterborne, non-native organisms that threaten the diversity or abundance of native species, or the ecological stability of impacted waters, or that threaten a commercial, agricultural, aquacultural, or recreational activity dependent on waters of the state.

This plan is an update to the ***Nonindigenous Aquatic Nuisance Species State Management Plan***, approved in 1996 as Michigan's plan under the auspices of the National Invasive Species Act. The purpose of this update is to summarize the good work accomplished during the past 6 years and provide guidance to continue the effort. The accomplishments are in Section II. Recommendations for needed actions are in Section III. More background information and history can be found in the original 1996 Plan: *Nonindigenous Aquatic Nuisance Species State Management Plan: A Strategy to Confront Their Spread in Michigan*, available at:

http://www.michigan.gov/deq/0,1607,7-135-3313_3677_8314-16514--,00.html

To develop this update, an Aquatic Nuisance Species Action Team consisting of the Directors of the Michigan's Departments of Environmental Quality (MDEQ), Natural Resources and Agriculture was convened by the Director of the Office of the Great Lakes in February 2002. Three committees were established by the Action Team to determine recommended actions needed to address the problem of prevention and control of aquatic nuisance species in Michigan's waters. They were:

- *Legislation and policy*
- *Information and education*
- *Research and monitoring.*

Approximately 40 people, representing more than a dozen public agencies and private institutions were involved in producing the update. In addition, the document was placed on the MDEQ website with associated announcements and comments received on the draft during a 30 day public comment period,

Projects

Aquatic Invasive Species

Overview

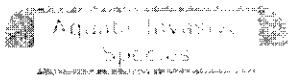
The Council of Great Lakes Governors launched the Aquatic Invasive Species Task Force in 2001. The goal of this Task Force is to stop the further introduction and spread of aquatic invasive species (AIS) into the Great Lakes--one of the Governors' nine priorities for Great Lakes restoration and protection. Since its inception, the Task Force has coordinated State efforts to combat AIS through advocacy, coordination and the identification of best practices.

The Task Force has spearheaded efforts to build regional support for a consistent federal strategy to combat AIS. Toward this end, the Task Force has advocated for the reauthorization of the National Aquatic Invasive Species Act.

The Task Force also continues to lead efforts to combat known AIS including the Asian carp that threaten to enter the Great Lakes Basin. Recently, the Task Force spearheaded efforts to fund the construction of a permanent dispersal barrier in the Chicago Sanitary and Ship Canal. Task Force members have also been on the front lines in supporting full federal funding for the construction, maintenance and operation of the barrier.

The Task Force has been charged to assist the Great Lakes' Governors' Priorities Initiative in the development of the AIS component of the Great Lakes Protection and Restoration Strategy. It is recognized that AIS prevention and control is central to ecosystem health and that a regional strategy is needed.

The Task Force continues to identify options for how the Governors and Premiers can best arrest the introduction and spread of AIS within the region. Toward this end, the Task Force has researched



★ Overview

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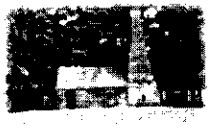
various treatment technologies for addressing transmission through ballast water on ships. The Task Force continues to investigate promising management techniques and technologies to identify best practices that can be quickly deployed.



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July 16, 2004

The Honorable Michael Leavitt
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Leavitt:

As Co-Chairs of the Council of Great Lakes Governors, we would like to thank you for your recent initiatives related to protecting the Great Lakes, including your leadership of the new Great Lakes Interagency Task Force. It is as Chair of this Task Force that your assistance is urgently needed to combat one of our most imminent threats to the Great Lakes. We strongly urge you to make securing full federal funding for the Chicago Sanitary and Ship Canal dispersal barrier a Task Force priority.

The Great Lakes Governors are committed to stopping the introduction and spread of aquatic invasive species and particularly, at this time, the introduction of Asian Carp into the Great Lakes. Combating aquatic invasive species is one of the Governors' nine shared priorities for restoring and protecting the Great Lakes as outlined in our October 1, 2003 letter sent to members of Congress.

The Great Lakes form the world's largest freshwater ecosystem and continued introduction of aquatic invasive species, most particularly Asian Carp, would have devastating economic and ecological impacts based on past experience. These invaders threaten a sustainable sport fishing industry that generates $7.3 billion in economic output annually and supports 66,000 jobs in the United States alone. Commercial fisheries and Canadian fisheries add to this economic value.

As you know, the U.S. Army Corps of Engineers is currently operating a temporary electric dispersal barrier on the Chicago Sanitary and Ship Canal to prevent the Asian Carp from entering the Great Lakes. However, this barrier is approaching the end of its three-year design life.

On May 14, 2004, the Great Lakes Governors articulated support for the House and Senate Great Lakes Task Force's appropriations request related to the construction, operation and maintenance of the Chicago Sanitary and Ship

Canal dispersal barrier (see attached letter). We are continuing to work with members of Congress to ensure that the federal government provides full federal funding for the following:

- Making the existing demonstration barrier permanent.
- Constructing a second permanent, two-pronged (two electrode arrays) barrier according to the design recommended by the Barrier Advisory Panel.
- Operating and maintaining both barriers.

We urge the Great Lakes Interagency Task Force to support these Congressional efforts.

The U.S. Army Corps of Engineers is scheduled to start constructing a permanent, two-pronged barrier this summer, but there is currently a projected funding shortfall of approximately $1.8 million. In part, the funding shortfall is a result of unanticipated costs. During field studies of the demonstration barrier, it was determined that barge traffic may have temporarily interrupted the electrical field. Increasing the field strength and providing redundancy by constructing two prongs for the permanent barrier will correct for this problem but adds to the cost of the project. Unfortunately, federal regulatory and legislative hurdles have precluded the provision of these critical funds and, without them, the barrier being constructed may not provide the necessary protections.

We understand that the U.S. Army Corps of Engineers requires these funds by the end of August to move forward with construction this summer on the permanent, two-pronged barrier. We have asked the Council of Great Lakes Governors' Aquatic Invasive Species Task Force made up of representatives from each of the Great Lakes States and Provinces to take the lead on ensuring that this funding is made available. They have been holding at least weekly conference calls to discuss potential solutions and have simultaneously been exploring alternatives with the Great Lakes Protection Fund, the Great Lakes Fishery Trust and various other non-governmental sources.

In concert with our efforts, we believe that the Great Lakes Interagency Task Force is well positioned to help tackle the issue and we are encouraged by its inclusion in your July 15 agenda. In addition to overcoming the short and long-term funding challenges related to construction, operation and maintenance, the Task Force could provide a useful forum for better coordinating the federal agencies working on issues related to the dispersal barrier. The Task Force can also serve as a focal point for our collective efforts--illustrating the high-level intergovernmental commitment to combating this threat.

We welcome your continued leadership and look forward to working with you on this issue of critical importance. Thank you for your commitment to restoring and protecting the Great Lakes. Should there be questions, please do not hesitate to contact David Naftzger, Executive Director of the Council of Great Lakes Governors, at (312) 407-0177.

Sincerely,

Jim Doyle
Co-Chair,
Council of Great Lakes Governors
Governor, State of Wisconsin

Bob Taft
Co-Chair,
Council of Great Lakes Governors
Governor, State of Ohio

attachment

cc: Amy Farrell, Policy Advisor to the Administrator, U.S. Environmental Protection Agency;
Gary Gulezian, Director, Great Lakes National Program Office, U.S. Environmental Protection Agency;
Tom Skinner, Regional Administrator, Region 5, U.S. Environmental Protection Agency

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e-mail: cglg@cglg.org

September 17, 2004

The Honorable Michael Leavitt
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Leavitt:

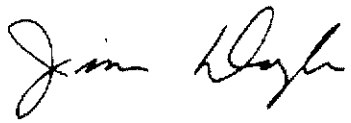
As Co-Chairs of the Council of Great Lakes Governors, we would like to thank you again for your recent initiatives to protect the Great Lakes. We also applaud your continuing personal commitment to implement the President's Executive Order establishing the Federal Great Lakes Interagency Task Force. We are eager to continue working with you on these efforts.

As we work toward our longer-term objectives, there are imminent threats to the Great Lakes that require us to act immediately. To that end, we understand that the Federal Great Lakes Interagency Task Force will meet on September 24. There are clearly many funding priorities that could be included in the agenda for this meeting. But, we believe that there is no greater priority at this time than identifying federal funding sources to complete the construction of the Chicago Sanitary and Ship Canal dispersal barrier. It is our understanding that a commitment of $1.8 million must be made by October 1, 2004 if the new two barrier system, as recommended by the Dispersal Barrier Advisory Panel, is to be completed before the end of this year. This funding is absolutely essential to protect the Great Lakes. Our July 16 letter on this issue is attached for your reference.

In addition to dispersal barrier funding, the Great Lakes Governors continue to support efforts to fund the President's request for Legacy Act implementation. As you know, on May 14 we communicated our support for this important initiative to members of Congress. We welcome opportunities to work with you and the President on this issue.

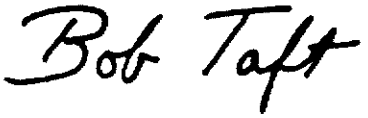
Thank you again for your commitment to restoring and protecting the Great Lakes. Should there be questions, please do not hesitate to contact David Naftzger, Executive Director of the Council of Great Lakes Governors, at (312) 407-0177.

Sincerely,



Jim Doyle

Co-Chair,
Council of Great Lakes Governors
Governor, State of Wisconsin



Bob Taft

Co-Chair,
Council of Great Lakes Governors
Governor, State of Ohio

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September 27, 2004

The Honorable Ted Stevens
Chairman
U.S. Senate Committee on Appropriations
The Capitol, S-128
Washington, D.C. 20510

The Honorable C.W. Bill Young
Chairman
U.S. House Committee on Appropriations
The Capitol, H-218
Washington, D.C. 20515

The Honorable Robert C. Byrd
Ranking Member
U.S. Senate Committee on Appropriations
The Capitol, S-125A
Washington, D.C. 20510

The Honorable David R. Obey
Ranking Member
U.S. House Committee on Appropriations
1016 Longworth House Office Building
Washington, D.C. 20515

As Co-Chairs of the Council of Great Lakes Governors, we are writing to encourage you to support the Great Lakes Congressional delegation's proposal to authorize $6.825 million in federal funding for the Chicago Sanitary and Ship Canal Dispersal Barrier project in Illinois. This authorization has broad support from many groups, including the administration. Passage of authorizing language is needed before the end of the fiscal year to ensure that the United States Army Corps of Engineers (USACE) is able to fully complete construction on the barrier in 2004, so time is of the essence.

The Great Lakes form the world's largest freshwater ecosystem. Continued introduction of aquatic invasive species, most particularly the Asian Carp, would have devastating economic and ecological impacts, threatening a sustainable sport fishing industry that generates $7.3 billion in economic output annually and supports 66,000 jobs in the United States alone.

As you know, the USACE is currently operating a temporary electric dispersal barrier on the Chicago Sanitary and Ship Canal to prevent the Asian Carp from entering the Great Lakes. However, this barrier is approaching the end of its three-year design life. Before it fails, construction on a second, permanent barrier must be completed in order to deter the Asian Carps' introduction into the Lakes.

While the USACE has initiated construction on this second, permanent barrier under Section 1135 of the Water Resources Development Act (WRDA), there is shortfall that now stands at $2.4 million. The Great Lakes States are dismayed that the cost of the barrier continues to rise; the $2.4 million figure is a $600,000 increase over the amount projected as recently as a week ago. Nevertheless, the Great Lakes Governors stand ready to provide up to $575,000 for the non-federal match needed to move forward with this critical project to protect our fisheries and tourism economies.

On May 14, 2004, the Great Lakes Governors articulated support for the House and Senate Great Lakes Task Force's appropriations request related to the construction, operation and maintenance of the Chicago Sanitary and Ship Canal dispersal barrier.

We continue to urge you to ensure that the federal government provides full federal funding for the following:

- Making the existing demonstration barrier permanent.
- Constructing a second permanent, two-pronged (two electrode arrays) barrier according to the design recommended by the Barrier Advisory Panel.
- Operating and maintaining both barriers.

We appreciate your consideration of this request and look forward to continuing to work with you on this issue of critical importance. We believe progress toward our shared goals for the Great Lakes is essential to the public health and economic vitality of our nation. Should there be questions, please do not hesitate to contact David Naftzger, Executive Director of the Council of Great Lakes Governors, at 312-407-0177.

Sincerely,

Jim Doyle
Co-Chair,
Council of Great Lakes Governors
Governor, State of Wisconsin

Bob Taft
Co-Chair,
Council of Great Lakes Governors
Governor, State of Ohio

Enclosures

May 14, 2004 Appropriations Request Letter from the Council of Great Lakes Governors
September 22, 2004 Letter from U.S. EPA Administrator Michael Leavitt to Governor Jim Doyle and Governor Bob Taft
September 24, 2004 Letter from the Great Lakes Congressional Delegation

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November 17, 2009

Secretary Robert M. Gates
U.S. Department of Defense
Washington, D.C. 20301-1400

Dear Secretary Gates:

As you know, the Great Lakes are at risk from the grave threat posed by Asian carp and other harmful aquatic invasive species. Over the past several years, the Great Lakes Governors have repeatedly urged that protections be strengthened. Unfortunately, recent evidence confirms that Asian carp are closer than ever to entering the Great Lakes. These carp potentially threaten public safety and the ecological integrity of the world's largest freshwater ecosystem. We again call on you, through the Army Corps of Engineers, to aggressively take the necessary steps to stop this threat.

The Water Resources Development Act of 2007 authorized the completion of the barrier needed to help prevent the Asian carp and other species from entering the Great Lakes system through the Chicago Sanitary and Ship Canal. Without the completion and operation of an effective barrier system in the Chicago Sanitary and Ship Canal, the Asian carp may soon enter the Lakes through the Illinois and Chicago River systems. Unfortunately, the construction of the full barrier system remains unfinished.

A year ago, the Great Lakes Governors requested that you provide us with a detailed work plan and timeline to complete barrier construction and testing, and then to begin operation at full capacity as soon as possible. We respectfully request that barrier IIb be completed and tested before June 2010 when it will be necessary to take down the barrier again for routine maintenance.

Further, we ask that you share with us additional measures that either will be taken or are under consideration to more broadly counter the threat of invasive species entering the Great Lakes through the Illinois and Chicago River systems. The barrier system is very important but necessarily forms but one part of a larger protective network. All available authorities at your disposal must be exercised aggressively to strengthen these protections.

Our region, and our nation, depends on the Great Lakes. The Asian carp pose a grave and immediate threat. The Great Lakes States are working individually and together to address this threat aggressively. We cannot afford to act cautiously, and ask that you join us in taking action to stop this threat.

Sincerely,

Pat Quinn
Governor of Illinois

Mitch Daniels
Governor of Indiana

Jennifer M. Granholm
Governor of Michigan

Tim Pawlenty
Governor of Minnesota

Ted Strickland
Governor of Ohio

Edward G. Rendell
Governor of Pennsylvania

Jim Doyle
Governor of Wisconsin