

International Joint Commission

July 5, 2002

Honorable Colin Powell
Secretary of State
2201 C Street, NW
Washington, DC 20520

The Honourable Bill Graham
Minister of Foreign Affairs
125 Sussex Drive
Ottawa, Ontario K1A 0G2

Dear Secretary Powell and Minister Graham

The purpose of this letter is to request immediate action by the governments to prevent the imminent introduction of Asian carp into the Great Lakes. Scientific consensus indicates that the introduction of Asian carp may result in economic and ecological damages to the Great Lakes ecosystem that far exceed those brought about by the previous introduction of the sea lamprey and the zebra mussel.

Recent evidence indicates Asian carp, prolific non-indigenous aquatic nuisance species, may now be within 25 miles of Lake Michigan – putting the entire Great Lakes Basin ecosystem at highest risk of invasion. Three species of Asian carp (silver, bighead, and black) were purposefully introduced to the southern USA to control problematic algal blooms and populations of snails that affected the fish aquaculture industry. The bighead and silver carp species escaped from confinement during major flood events in the early 1990's, and entered the Mississippi River. Since this time, they have moved up through the Mississippi River system, and now occur in the Illinois River and are approaching the Chicago Ship and Sanitary Canal, which is connected, to the Great Lakes near Chicago, Illinois. It is believed that, based upon their current rate of dispersal, Asian carp could reach Lake Michigan from the Mississippi –Illinois system within this year. In addition, one Bighead carp was collected in a net in Lake Erie in 2000 by scientists at the University of Guelph and another was found in a fountain in downtown Toronto, most likely the result of intentional releases.

The International Joint Commission brings this urgent matter to your attention under its alerting capacity pursuant to the Boundary Waters Treaty of 1909 and its responsibilities under the Great Lakes Water Quality Agreement. The Commission believes that Asian carp pose a tremendous threat to the biological integrity of the Great Lakes. Evidence to date indicates that these species can grow to an immense size (over 50 inches and 50 - 110 lbs.) and can consume large quantities of food (up to 40% of their body weight daily in vegetation, zooplankton, or native mussels and fish). Silver carp have been known to reach weights of 12 lbs. in one year of life, quickly becoming so large as to no longer be vulnerable to native predators. Asian carp are extremely prolific (each female carries up to 1 million eggs), quickly becoming common in invaded habitats. Commercial fisheries within some reaches of the Mississippi River have ceased as a result of impacts from these creatures, leaving native fish populations decimated and native

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1250 23rd Street NW, Suite 100, Washington, D.C. 20440 (202) 736-9000

mussel populations at risk. In some backwaters of the Mississippi River system, surveys during seasonal fish kills have documented populations of 97% Asian carp and only one of each of 4 native species.

The National Invasive Species Act of 1996 directed the U.S. Army Corps of Engineers to investigate and identify environmentally sound methods for preventing and reducing the dispersal of non-indigenous aquatic invasive species between the Great Lakes-St. Lawrence River and the Mississippi River drainage basins through the Chicago Ship and Sanitary Canal (the Canal). The Canal forms a man-made link between the Great Lakes and the Mississippi River system, providing a ready conduit for transfers of non-indigenous aquatic invasive species between the two systems.

The Corps of Engineers, working in cooperation with the Environmental Protection Agency, initially began design and construction of an electronic dispersal barrier to determine if the movement of invasive species from the Great Lakes basin into the Mississippi River system could be halted. The round goby (another well known non-indigenous aquatic invasive species) was the initial focus of this effort. Although this project was not completed in time to prevent the movement of the round goby into the Mississippi River, this \$2.2 million barrier system may be effective in preventing the movement of Asian carp into the Great Lakes. The electrical barrier was turned on in April 2002. However, as currently authorized, this barrier is only a limited life, experimental prototype and is scheduled to be removed at the end of the 18-month Corps investigation. It will require more extensive testing and modification to ensure that it effectively prevents movement of Asian carp into the Great Lakes. The current prototype design and funding level does not provide for a backup electrical generator, so that in the absence of electrical power, the barrier will fail (the Chicago area experiences frequent electrical supply interruptions).

In addition, a second, permanent barrier should be installed to increase the probability of stopping the movement of Asian carp into the Great Lakes. Also, it may be necessary to evaluate long-term options with broader applications, other chemical and physical measures, to prevent this waterway from becoming a "revolving door" for aquatic invasive species between the Mississippi River-Great Lakes-St. Lawrence River systems. Research on such issues will require funding.

The Commission believes that it is vital that the governments take action immediately to stop these fish from entering and establishing themselves in the Great Lakes.

The U.S. government needs to:

- 1) Appropriate funds for FY 2003 to support operation of the current temporary barrier system and acquisition of a back-up generation system for this barrier in order to ensure its continuous operation. There are no funds identified in the President's Budget for FY 2003 for operations or for acquisition of back-up generation
- 2) Obtain authorization and appropriation for the Corps of Engineers and/or other

agency to:

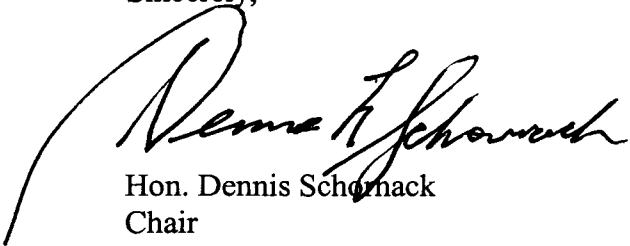
- Continue operation of the current barrier and monitoring of its operation and acquire land for the installation of a second, more permanent barrier. The current authorization of the Corps of Engineers expires in October 2003 and does not include a second barrier or authorization for continued operation.
- Investigate long-term chemical and physical environmentally sound alternatives to prevent the movement of aquatic invasive species to and from the Great Lakes.

Both governments need to consider implementing regulatory controls to prevent introduction of Asian carp via other pathways such as the food and bait fish industries, the aquarium trade, and aquaculture. Other issues that should be considered include establishing regulatory controls to prevent importation of live species of Asian carp, educating the retailers and purchasers of Asian carp for food about the threat of Asian carp to the Great Lakes ecosystem, and discouraging transport of personally-caught bait or water (boat wells, fish lockers) from one water body to another within the Mississippi River-Great Lakes-St. Lawrence River ecosystems.

Before their introduction, no one could have envisioned the full extent of the damage to the Great Lakes ecosystem and its many water-dependent economic sectors caused by zebra mussels. The effects of Asian carp on the Mississippi River system have been well documented by State Agencies and the U.S. Fish and Wildlife Service. This level of destruction in the Great Lakes would be disastrous. It is absolutely clear that the governments should do everything possible to implement coordinated actions to prevent the introduction of Asian carp to the Great Lakes, thus protecting one of our nation's most vital national resources and the largest freshwater ecosystem on earth.

The Commission is ready to provide assistance within its responsibilities and capabilities in addressing this most urgent matter. We have enclosed, for your information, copies of a letter recently sent by the Great Lakes Fishery Commission to the Appropriations Committees of the US Senate and House supporting funding for a barrier system.

Sincerely,



Hon. Dennis Schomack
Chair
U.S. Section
International Joint Commission



The Rt. Hon. Herb Gray, PC, QC
Chair
Canadian Section
International Joint Commission

Encl.: Letter, Great Lakes Fishery Commission to the Subcommittee on Energy and Water of the US Committee on Appropriations



Great Lakes Fishery Commission

ESTABLISHED BY CONVENTION BETWEEN CANADA AND THE UNITED STATES TO IMPROVE AND PERPETUATE FISHERY RESOURCES

June 19, 2002

Hon. Sonny Callahan, Chairman
Subcommittee on Energy and Water
Committee on Appropriations
2362 Rayburn House Office Building
Washington, DC 20515

Hon. Pete Visclosky, Ranking Member
Subcommittee on Energy and Water
Committee on Appropriations
2362 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Chairman and Ranking Member:

Three species of threatening Asian carp (silver, bighead, black) are poised to invade the Great Lakes from the Mississippi River basin. These fish have the potential to seriously damage or destroy the Great Lakes ecosystem, posing a danger to the fish communities and disrupting the food web. Fortunately, the Great Lakes have a first-line of defense against these invaders: a new barrier activated recently in the Chicago-area to block the migration of these and other invasive species. This barrier was built and is operated by the U.S. Army Corps of Engineers. On behalf of the Great Lakes Fishery Commission (GLFC), the Council of Lake Committees (CLC), and citizen Advisors to the commission, I am writing to communicate the need for immediate and annual operating funds for this barrier.

According to best estimates, \$360,000 in one-time costs are needed immediately for the barrier to be fully functional and \$340,000 are needed annually for operations. The attached summary describes how these funds will be used. These funds are managed by the Corps of Engineers, Chicago District Office.

These funds are required immediately to ensure the safety of the Great Lakes from invaders from the Mississippi River. Additional control measures will be required to protect the Great Lakes from other invading species from the Mississippi. Management agencies on the Great Lakes are working to develop options to ensure this protection.

The three threatening species of Asian carp were introduced to the southern U.S. by the aquaculture industry as a way to manage problematic algae blooms and problematic snails. As often happens, these species escaped from confinement (during a major flood event in 1993) and entered the Mississippi River. Over time, they have moved up through the Mississippi River system and now occur in the Illinois River and ship/sanitary canal. This canal is connected to the Great Lakes in the city of Chicago. Based upon their current rate of dispersal, these carp could reach Lake Michigan within the next year. After that, their spread to the other Great Lakes would be inevitable.

These three species of Asian carp pose real, significant threats to the Great Lakes. These fishes can grow to immense sizes (up to six feet and 110 pounds). They are known to become very abundant. Silver and bighead carp strain large amounts of zooplankton and phytoplankton and have the potential to interact strongly and adversely with sport and commercial fishes in the Great Lakes. Black carp eat mollusks and, thus, could put additional pressure on native clams—some endangered—already impacted by zebra and quagga mussels. Moreover, 50-80 pound silver carp pose a threat to human safety as they are known to jump vertically (as high as 10 feet!) out of the water when startled, even jumping into water crafts.

The potential Asian carp invasion has been a topic of discussion during recent meetings of the Council of Lake Committees (CLC), the Great Lakes Fishery Commission (GLFC), and the Committee of Advisors. The CLC is a committee of state, provincial, and tribal fishery managers with primary management authority on the Great Lakes. The GLFC is a U.S.-Canadian agency responsible for protecting fish stocks of common concern. The Committee of Advisors is a federally-legislated group of citizens who monitor fishery management activities and make recommendations to the GLFC. These groups and agencies are unanimous in calling for immediate funding for the barrier and for adequate annual costs to operate it. We are also aware that the House and Senate Great Lakes Task Forces have asked for funds for this barrier as well. Attached is a resolution for an effective barrier, passed by both the CLC and the Advisors and endorsed by the GLFC.

Unlike the case with other aquatic nuisance species, the government today has a rare opportunity to prevent the entry of potentially devastating invaders. The barrier is in place and is operational. We just need the funds to ensure an effective barrier and to continue to operate it. Government management agencies and the public are united in urging Congress to appropriate the funds we have identified. Thank you for your consideration in this matter.

Sincerely,



Ald. Bernard J. Hansen
Chairman, U.S. Section

Cc: Co-chairs, Great Lakes Task Force
Joy Mulinex, Director, Great Lakes Task Force
Chair and Vice-Chair, Council of Lake Committees
Chair and Vice-Chair, Committee of Advisors

Chicago Sanitary and Ship Canal Dispersal Barrier Funding Needs

In April 2002, after years of planning and design the Chicago Sanitary and Ship Canal aquatic nuisance species dispersal barrier located near Romeoville, IL was energized. This project, funded under section 1202 of the National Invasive Species Act (NISA 1996), is the first line of defense against potentially devastating invasive species from the Mississippi River basin. However, the project currently falls short of that which was envisioned and recommended by the dispersal barrier advisory panel, a multi-agency stakeholder group assembled to guide development of the dispersal barrier.

Back-up Generator

The most troubling feature omitted from this 'electric fish fence' is back-up power. Short-term power outages that occur in this area would disrupt the effectiveness of the barrier. Two Asian fish, the bighead carp and silver carp, are known to occur a mere 30 miles downstream from the barrier site. The dispersal barrier is the only obstacle standing between these fish and the Great Lakes. A back-up generator would help to assure that the electric field does not falter and allow movement of invasive species between the Great Lakes and Mississippi River basin.

Operation and Maintenance

Another immediate need is funding for the operation and maintenance contract and to pay for the electricity to operate the array in the coming federal fiscal year (2003). No funds have been allocated to the U.S. Army Corps of Engineers, Chicago District for the operation and maintenance contract or for electrical costs in the coming fiscal year. Without additional funding, the electric array would be shut down and as a result, protection from the spread of invasive fishes would be lost.

Second Barrier Site

Less immediate, though just as critical are funds needed for investigation of a site for a second barrier array. The material used for the electrodes in the current array has a relatively short (3 years) expected lifespan. The barrier will have to be shut down for replacement. For this reason a second barrier is required as a failsafe.

Monitoring

Finally effectiveness of the barrier needs to be monitored. Current efforts involve tracking individual fish with radio tags. This type of monitoring will likely be supported through 2003 through a combination of grant and agency funds. Beyond 2003, funds will be needed to maintain the monitoring effort and to add an acoustic array to monitor fish movement near the dispersal barriers.

Acoustic Array

The acoustic array (\$60,000) is promising technology that should enhance the effectiveness of the barrier system by possibly deterring a greater variety of organisms.

Summary of Funding Needs (to U.S. Army Corps of Engineers, Chicago District):

- Back-up Generator - \$250,000 (includes generators and installation)
- Operation and Maintenance Contract - \$150,000 (annual)
- Electrical Costs - \$40,000 (annual)
- Second Barrier Site - \$50,000
- Monitoring - \$150,000 (annual)
- Acoustic array - \$60,000

One-time costs: \$360,000

Annual costs: \$340,000

Resolution Concerning Additional Funding for Continued Operation and Evaluation for the Chicago River Sanitary Ship Canal Electric Transmigration Barrier

Whereas invaders such as the round goby and zebra mussels in the Great Lakes have invaded the Mississippi River basin, and

Whereas other species such as the ruffe may likewise expand their range from the Great Lakes into the Mississippi River basin, and

Whereas, invaders (Asian carps) from Mississippi River basin are poised to invade the Great Lakes basin, and

Whereas, the Cal-Sag and Chicago Sanitary and Ship Canals are the expected routes for these range expansions, and

Whereas, critical components of the electric barrier in the Sanitary and Ship Canal have a three-year life expectancy, and

Whereas, there is no back-up power system in case of mainline power failure, and

Whereas, no funds are currently appropriated for operation and maintenance of the electric barrier in the coming fiscal year,

Therefore be it resolved that the Committee of Advisors, in the absence of adequate primary safeguards from shipping and aquaculture-mediated invasions, find

that U.S. federal funding is required on an emergency basis for maintenance, operation and improvement (including a backup generator) of the Chicago Sanitary and Ship Canal electrical barrier, constructed as a demonstration study by the U.S. Army Corps of Engineers under NISA 1996, and

that U.S. federal funding is required on an emergency basis for identifying and evaluating a site for a second barrier array, and

that U.S. federal funding is required to evaluate and implement additional options for enhancing barriers to prevent range expansion of invasive species between the Great Lakes and Mississippi River basins.

Resolution 02-03

Passed, June 4, 2002

Similar resolution passed by the Council of Lake Committees, April, 2002