

Nos. 1, 2, 3, Original

IN THE
Supreme Court of the United States

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.

STATE OF MICHIGAN,
Complainant,

v.

STATE OF ILLINOIS AND THE METROPOLITAN SANITARY
DISTRICT OF GREATER CHICAGO,
Defendants,
UNITED STATES OF AMERICA,
Intervenor.

STATE OF NEW YORK,
Complainant,

v.

STATE OF ILLINOIS AND THE METROPOLITAN SANITARY
DISTRICT OF GREATER CHICAGO,
Defendants,
UNITED STATES OF AMERICA,
Intervenor.

**BRIEF OF AMICUS CURIAE HER MAJESTY
THE QUEEN IN RIGHT OF ONTARIO
IN SUPPORT OF THE STATE OF MICHIGAN'S
MOTION FOR A PRELIMINARY INJUNCTION**

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INTRODUCTION

The Province of Ontario (the “Province” or “Ontario”) submits this brief *amicus curiae* in support of the State of Michigan’s motion for a preliminary injunction.¹ As explained below, the potential introduction of destructive invasive species—bighead carp and silver carp, collectively known as Asian carp—into the Great Lakes poses a direct and immediate threat of irreparable injury to the environment and economy of Ontario.

INTEREST OF AMICUS

The Province is the second largest province in Canada, with a population of more than twelve million citizens. It is a province rich in natural resources, including its fresh waters, fish and water-dependent natural resources. Approximately 40% of the shoreline of the Great Lakes and 36% of the waters of the Great Lakes lie within the boundaries of Ontario. There are 63 aboriginal communities that border the Great Lakes. While under the Constitution Act, 1867 (U.K.), 30 & 31 Victoria, c. 3, the Parliament of Canada has exclusive legislative authority in relation to inland fisheries, Canada has delegated responsibility for the management of inland fisheries to its provinces. Canadian federal and provincial legislation related to fish create a

¹The parties have consented to the filing of this brief. Because of the timing of Michigan’s motion, ten days advance notice of *amicus curiae*’s intention to participate was not feasible. No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae* or its counsel made a monetary contribution to its preparation or submission.

cooperative scheme for the management of fisheries in Ontario. Ontario is steward of its natural resources and is responsible for their effective and sustainable management.

The Province is responsible for protecting the public health, welfare and economic well-being of its citizens, the value of its natural resources and the quality of its environment. Because of its shared environment with the United States, the Province has often participated in U.S. regulatory processes potentially affecting its environment and joined, either as a party or *amicus curiae*, in U.S. natural resources and environmental litigation. *E.g.*, *Her Majesty the Queen in Right of Ontario v. EPA*, 912 F.2d 1525 (D.C. Cir. 1990) (protecting common ecosystem from problem of acid rain); *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001) (protecting common ecosystem from power plant air emissions); *United States v. Cinergy*, 458 F.3d 705 (7th Cir. 2006) (protecting common ecosystem from power plant air emissions).

The fishery resources of Lakes Huron, Superior, Ontario, Erie, Lake St. Clair and the Detroit and St. Clair Rivers have major social, environmental and economic importance to the Province, its citizens and all persons who live in the Great Lakes Basin. If Asian carp are allowed to make their way from the Chicago Sanitary and Ship Canal into Lake Michigan, they will inevitably become part of the Great Lakes ecosystem of which these waters are a part. The economic value of the sport and commercial fisheries in the Great Lakes in Ontario is substantial. In 2005, direct recreational fishery expenditures (primarily transportation, food and lodging for fishers) amounted to \$215 million Cana-

dian. In addition, in 2005, there were expenditures of \$228 million Canadian related to the purchase of boats, motors and other items connected to the recreational fishery. The approximate gross value of the commercial fishery in the Great Lakes in Ontario varies from \$180 to \$215 million Canadian per year. Eighty per cent of that value lies in the Lake Erie commercial fishery. Should Asian carp become colonized in the Great Lakes system, Lake Erie is likely to be the Great Lake most severely affected.

The sound management of the aquatic resources and water dependent natural resources is vital to the Province. Over time, the Great Lakes fishery resources have been diminished and significantly altered through exploitation, degradation of habitat and the introduction or invasion of plant and animal life. It is essential that there be an ecosystem approach to management that focuses on the maintenance and development of entire fish communities for the benefit of society and the environment and to meet public demand. This approach requires the protection and rehabilitation of both aquatic habitat and depleted stocks of desirable species, vigilance against aquatic invasive species and effective fisheries management to ensure stable self-sustaining foundations for entire fish communities.

As part of its effort to conserve and manage its fishery resources, Canada and the Province have recognized that coordination and cooperation between themselves and with the United States and individual states is a critical element to ensure that fisheries are maintained in a sustainable and responsible way. The ecosystem approach to fisheries management in the context of waters that are shared by Ontario and the Great Lakes states can only be

effective with the cooperation and consensus of the various Canadian and U.S. state and federal agencies responsible for the management of those resources. Fish do not respect the 49th Parallel, and the Great Lakes Basin ecosystem does not pay attention to international boundaries. Cooperative decision-making is the best way to manage and conserve a fragile resource.

It is clear that now is the moment to act to prevent the introduction of Asian carp into the Great Lakes, since prevention is far preferable to, and less costly than, attempts at eradication or control (which are often ineffective or only partially effective) that must follow establishment of an invasive species in order to mitigate its negative effects on the ecosystem.

To date, the Great Lakes jurisdictions have recognized a responsibility to take action within their borders. Ontario and the Great Lakes states have acted in a manner appropriate to each jurisdiction to address the potential threat of the introduction of live Asian carp into the Great Lakes Basin waters through peoples' accidental or direct actions. In 2006 and 2004, respectively, Canada and Ontario amended their regulations to make it illegal to possess, buy or sell live Asian carp within the Province, and they have enforced these regulations. However, this is not enough and does not address the Great Lakes Basin ecosystem-wide problem that faces us here. For that, the jurisdictions must act together in a cooperative manner as has been done in other contexts.

Given the recognition of the shared responsibility of Canadian and U.S. jurisdictions for the waters and resources of the Great Lakes, international treaties, conventions, and state-provincial agreements have been entered into on water quality, water levels,

water removals and fisheries, to ensure their coordinated and effective management and protection.

One of these agreements is the Convention on Great Lakes Fisheries between the United States and Canada, which was signed in Washington, D.C., on September 10, 1954, and entered into force on October 11, 1955, 6 U.S.T. 2836, T.I.A.S. No. 3326 (the "1954 Convention"). The 1954 Convention was entered into by the two federal governments largely in response to the shared concern for the decline in certain fish stocks because of the damage caused by the invasion of sea lamprey, an eel-like fish that feeds on other fish. It is implemented in Canada by a federal statute, the Great Lakes Fisheries Convention Act, R.S.C., 1985, c. F-17. Article II of the 1954 Convention establishes the Great Lakes Fishery Commission (the "Commission") and created the possibility of establishing and facilitating advisory committees for each of the Great Lakes. The important duties of the Commission include the coordination of research and the formulation of programs designed to determine the need for measures to ensure the sustained productivity of any desired fish stock, to protect these stocks from depletion and to provide a coordinated approach to fight aquatic invasive species.

Acting under the 1954 Convention, in 1981, Ontario, the eight Great Lakes states, and the two federal governments, with the help of the Commission, developed and agreed to *A Joint Strategic Plan for Management of Great Lakes Fisheries*, available at <http://www.glfc.org/fishmgmt/jsp97.pdf>. The *Joint Strategic Plan*, revised most recently in 1997, uses lake-specific committees as the Commission's action arms to achieve Commission policy goals and the

policy goals of the member organizations. Lake committees consist of senior fishery managers from Ontario, the eight Great Lakes states, and U.S. tribal jurisdictions that border the lakes. The committees meet several times annually and discuss a variety of issues related to the shared management of the fishery, including the management of sea lamprey and other aquatic invasive species. By following the *Joint Strategic Plan*, and through participation in the committee process, the jurisdictions have achieved substantial success in managing common problems on a consensus basis. This consensus-based approach is essential to the management of the Great Lakes' fisheries resources in a coordinated and effective manner. If Asian carp were to become established in the Great Lakes, it is anticipated that the damage that would be caused by them would require immediate and aggressive attention under the 1954 Convention. The responsibility of Ontario as a participant in the lake committees is to work to protect the environment while weighing the social and economic importance of the fishery to all users - sport fishers, commercial fishers, aboriginal people and local communities. All these interests would be threatened by the introduction of Asian carp into the Great Lakes.

Another international agreement of importance to Ontario is the Canada-United States Great Lakes Water Quality Agreement, 30 U.S.T.S. 1383, T.I.A.S. No. 9257 (1978), available at <http://www.ijc.org/re/agree/quality.html>. The two federal governments extended the approach of cooperative management to issues facing the Great Lakes when they signed the Great Lakes Water Quality Agreement in 1972. The Agreement reflects the two countries' commitment to resolve a wide range of water quality issues facing

the Great Lakes basin and the international section of the St. Lawrence River. These issues were, and in many cases still are, critical to the economic and social health of not only the Great Lakes region, but to the entire United States and Canada.

The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem, available at <http://www.ene.gov.on.ca/publications/6263e.pdf>, assists Canada in meeting its obligations under the Great Lakes Water Quality Agreement. It is the framework through which the governments of Canada and Ontario work cooperatively, with the support of other partners, to restore, protect and conserve the environmental quality of the Great Lakes Basin ecosystem in order to achieve the vision of a healthy, prosperous and sustainable Basin for present and future generations.

Lastly, one of the state-provincial agreements governs the management of withdrawals and diversions within the Great Lakes Basin. The Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement, signed December 13, 2005, by the eight Great Lakes states and Ontario and Québec, available at http://www.cglg.org/projects/water/docs/12-13-05/Great_Lakes-St_Lawrence_River_Basin_Sustainable_Water_Resources_Agreement.pdf, which recently entered into force for the United States, recognizes the importance of a shared management of our water resources in the Basin. *See* Pub. L. No. 110-342, 122 Stat. 3739 (2008), available at http://www.cglg.org/projects/water/docs/12-13-05/Great_Lakes-St_Lawrence_River_Basin_Water_Resources_Compact.pdf. In Article 207(11) of that Agreement, the parties to the Supreme Court decree that Michigan is seeking to reopen in this case have committed to making best

efforts to ensure that the input of Ontario and Québec regarding the decree will be sought. It is readily apparent in the circumstances that Ontario has a strong interest in the outcome of this case

The decree in *Wisconsin v. Illinois* is a key element in protecting the interests of all Great Lakes jurisdictions, including those in Canada. Indeed, in briefing the last time the decree was before the Court, the United States, in its December 1978 memorandum (at page 2) (App. 8a), noted particularly that the “maintenance of friendly relations with Canada” is implicated by the operation and modification of the decree. Further, as noted above, Article 207(11) of the Great Lakes-St. Lawrence River Sustainable Water Resources Agreement expressly recognizes that Ontario’s participation in matters relating to the decree is desirable, commits the parties to “use best efforts to facilitate the appropriate participation of . . . [the Province] in the proceedings to modify the decree” and directs that such participation shall not be unreasonably impeded or restricted.

ARGUMENT

THE INTRODUCTION OF ASIAN CARP TO THE GREAT LAKES POSES THE THREAT OF IMMEDIATE AND IRREPARABLE ENVIRONMENTAL HARM TO THE PROVINCE OF ONTARIO

This case presents an issue that is of vital importance to the Province, and it is equally vital to the Province that immediate action be taken to prevent the introduction of Asian carp—a destructive invasive species—into the Great Lakes ecosystem.

Among the fisheries to be most affected should Asian carp enter the Great Lakes near Chicago will probably be those in Lake Erie and Lake St. Clair. These environments, on both sides of the U.S.-Canada border, are believed to provide excellent environments which Asian carp may colonize. The fishery resources are inherently fragile in nature, and the introduction of an invasive species as voracious as the Asian carp could irreparably damage particular fish stocks. While it is not possible to know with certainty what the environmental and economic results of the introduction of Asian carp into the Great Lakes would be, it is all but certain that there would be a serious negative impact on the sport and commercial fisheries in the lakes, and in particular Lake Erie and Lake St. Clair. It is equally certain that efforts to control or eradicate such an invasive species are likely to be inherently less satisfactory than prevention of the occurrence of any invasion in the first instance. This is particularly true for Asian carp, since Asian carp have a different biology from native fish. They cannot be caught as part of a traditional hook and line recreational fishery and, in all probability, would be difficult to catch by existing commercial fishers using commercial fishing gear.

If Asian carp were introduced into the Great Lakes, the probable effect would be to drastically alter the food web. This would significantly alter the existing fish community structure from a fishery dominated in biomass by predacious native fish to a fish community dominated in biomass by the invasive Asian carp. Asian carp feed on algae and microscopic organisms in the water column consuming an amount representing a substantial proportion of their body weight every day. This feeding behavior removes

essential organisms normally relied upon by native fish, and would probably result in a decrease in their condition and decline in their population. It is expected that the food supply available to native top predator fish (that are highly sought after by the recreational and commercial fishery) would in turn be decreased by the effects of Asian carp. It is expected that the introduction of Asian carp would negatively alter the structure of fish communities and the food web, which would in turn dramatically affect the recreational and commercial fisheries.

One way to understand the effects that Asian carp may have in the Great Lakes is to examine the damage they have caused to the Mississippi and Illinois Rivers. There is overwhelming evidence of the irreparable harm in those watersheds resulting from the introduction of Asian carp there. They cause ecological damage by consuming huge amounts of essential nutrients, destroying the native fish community and establishing Asian carp as the overwhelmingly predominant biomass in the ecosystem. Colonization of Asian carp in portions of the Mississippi and Illinois Rivers has almost totally destroyed the commercial fisheries that relied on native fish communities. In addition, silver carp pose a serious physical threat to boaters and users of the waterways because of their habit of leaping out of the water in reaction to sound and vibration. Injuries to recreational boaters, water skiers and other users of the waters have occurred as a result of collisions with leaping silver carp. Ontario is concerned that similar damage or injury may occur in Ontario waters if Asian carp are introduced into the Great Lakes system.

What may happen as a result of the introduction of Asian carp in the Great Lakes can also be learned from the experience of other invasive species that have entered these waters. For example, zebra mussels, another invasive species, were introduced into the Great Lakes in the mid-1980's. Zebra mussels significantly changed the nature of the Great Lakes ecosystem, increasing water clarity, disrupting the food web and affecting fish habitat by altering the structure and composition of critical spawning habitat. Where zebra mussel populations dominate, they disrupt the food web by filtering nutrients from the water column and reducing the abundance of food sources for other organisms. Resulting water clarity encourages plant growth leading to oxygen depletion for fish. Overall, the impact is a reduction in the amount of food available to native species. In fact, zebra mussels have caused drastic declines in the native Great Lakes mussels (commonly known as clams). An estimate of the amount that has been spent to address problems related to zebra mussels in both the United States and Canada in the Great Lakes Basin is between \$3 and 7.5 billion Canadian. Between 1989 and 2004, Ontarians alone spent \$120 million Canadian on zebra mussel control. These disruptive effects are typical of those that other invasive species may have.

Another example of the damage that may be caused by invasive species is found in the sea lamprey which feeds on the once commercially and environmentally significant Lake trout (and other fish). Eventual decimation of Lake trout began when sea lamprey entered Lake Erie and the upper Great Lakes in the early 1920's with the opening of the Welland Canal. Sea lampreys are parasites that attach themselves to fish, suck their fluids and weaken them so that they

die from secondary infection or general decrease in fitness. So significant was the negative impact that the U.S. and Canadian federal governments entered into the 1954 Convention, one of the purposes of which was to develop a united attempt by the affected U.S. and Canadian jurisdictions to battle the sea lamprey. While today there are efforts to control sea lamprey through lampricide and male sterilization and subsequent release, the cost of such control measures is substantial, *e.g.*, on the order of \$20 million U.S. annually, of which Canada's contribution in 2009 was \$8.1 million Canadian. This annual and continual requirement to spend money in an attempt to control sea lamprey has not resulted in their eradication. Though a different approach to handling the introduction of Asian carp would need to be taken, any such approach would likely also be extremely costly.

Notwithstanding the substantial and very costly efforts by Ontario to cope with the problems of zebra mussels and sea lampreys, Ontario's fisheries continue to be bedeviled by these invasive species, and Ontario faces a long-term challenge in coping with them.

Ultimately, what happens at the control points for entry of Asian carp into Lake Michigan is not a purely a U.S. domestic issue. There will be profound consequences, if this invasive species is introduced to the Great Lakes, for Canadian jurisdictions, such as Ontario, as well. Our waters are interconnected, and irreparable harm to U.S. states will almost certainly entail similar irreparable harm to Ontario. What happens in Illinois' waters can and will affect the sustainability of the Lakes' fish populations shared with the other Canadian and American stakeholders.

Further, the ecosystem approach to fisheries management, as taken under the *Joint Strategic Plan for Management of Great Lakes Fisheries*, which is so important to the maintenance of our fisheries, can be fundamentally compromised by the introduction of invasive species such as Asian carp. In such circumstances, preventing the introduction of Asian carp into the Great Lakes and protecting the Lakes' fishery resources is of great national and international importance.

CONCLUSION

For all the reasons set forth above, Ontario respectfully submits that the State of Michigan's motion for a preliminary injunction should be granted.

Respectfully submitted,

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