

**Alliance for the Great Lakes · Clean Water Action-Michigan · Clean Water Action-Minnesota · Freshwater Future · Friends of the Cloquet Valley State Forest · Great Lakes United · Healing Our Waters-Great Lake Coalition · Izaak Walton League of America – Great Lakes Committee · Minnesota Trout Unlimited · National Wildlife Federation · Natural Resources Defense Council · Ohio Environmental Council · Prairie Rivers Network · Sierra Club-Great Lakes Program · Tip of the Mitt Watershed Council · Trout Unlimited**

May 17, 2010

The Honorable Carl Levin  
United States Senate  
Washington, DC 20510

Dear Senator Levin:

Rarely do we have a chance to have something good come out of something potentially so bad. We are faced with just that opportunity right now as our nation debates how to stop aquatic invasive species like Asian carp from moving between the Mississippi River and the Great Lakes. Realizing this opportunity, however, requires Congress to act by directing the Army Corps of Engineers to study the permanent, hydrologic separation of the Mississippi River and Great Lakes in its Aquatic Nuisance Species Interbasin Transfer Feasibility study. As currently authorized, the Army Corps cannot adequately consider measures that would completely eliminate the movement of invasive species between these two Great Waters.

When the Chicago Waterway System (CWS) was first constructed in the late 19th and early 20th centuries as a response to a public health emergency, it was an engineering marvel. Not only did the Chicago Sanitary and Ship Canal move water pollution away from Lake Michigan and a thirsty city's drinking water, it also connected the Great Lakes with the Mississippi River allowing, for the first time, rapid movement of goods through the growing city. But it also controversially diverted and continues to divert massive amounts of water away from the Great Lakes and opened the door to the movement of invasive species between the two ecosystems.

Today, over 100 years later, there is a growing consensus across Chicago and the Great Lakes region that stopping the movement of invasive species between the Great Lakes and Mississippi River is critical to maintaining both the region's ecological and economic vitality. Asian carp and other invasive species out-compete native species and disrupt both the food chain and industries that depend on healthy ecosystems (such as commercial and sport fishing, boating, and other tourism) and threaten the quality of people's drinking water.

The only permanent and sustainable solution to this problem is hydrologic separation of these two aquatic ecosystems. If done right, hydrologic separation will involve smart, well-planned investments that will establish new infrastructure in the Chicago area that make the region more globally competitive, and upgrade treatment of wastewater and storm water. The result can be a revitalized Chicago Waterway System that not only closes the highway for invasive species, but also enhances Chicago's transportation system, creates local and regional jobs, reduces business costs across the region, and improves water quality, tourism, and recreation. Hydrologic separation means infrastructure upgrades that will benefit the entire Great Lakes and Mississippi region by enhancing our economic competitiveness and allow us to live more sustainably with our freshwater resources.

Unless we move to realize that bold vision, we will continue to face new and possibly worse threats from aquatic invasive species. The first step needed is to ensure that the Army Corps is directly empowered to design a permanent solution to the problem.

Unfortunately, the Corps' charge is not that clear today. The Army Corps finds itself tasked with focusing on measures that will not permanently end the movement of invasive species, even as they spread their limited budget too thinly. While interim measures are critical, the Corps and other agency partners have not been expressly charged with examining and proposing a permanent solution. In 2007 Congress authorized the Army Corps in the Water Resources Development Act to look at "the range of options and technologies available to prevent the spread of aquatic nuisance species between the Great Lakes and Mississippi River Basins through the Chicago Sanitary and Ship Canal and other aquatic pathways" (Sec. 3061(d)). These options include technologies such as acoustic bubble screens, electric fences, and chemical poisoning. However, existing research on fish barrier technologies already suggests that these approaches are unlikely to achieve 100 percent effectiveness. A 2004 study<sup>1</sup> undertaken cooperatively by Minnesota, Wisconsin, and the U.S. Fish and Wildlife Service describes the efficacy of various technology barriers, finding that anything short of a physical barrier is unlikely to be 100 percent effective against fish – not to mention other aquatic organisms. A 2006 Sea Grant study of options to protect Lake Champlain from invaders comes to a similar conclusion.<sup>2</sup>

While technological barriers may help slow down the progress Asian carp are making, the invasive carp will sooner or later find their way to Lake Michigan unless their watery path is completely cut off. We must also not lose sight of the risk from the many other invasive species that could use the Chicago Waterway System to move between the Mississippi River and the Great Lakes – in both directions – many of which are not likely to be impeded by the same measures now being targeted at the bighead and silver carp.

In addition to executing short term control strategies, we believe that the Army Corps and its partner agencies should focus its planning and analysis on the one permanent solution: how to hydrologically separate the Great Lakes from the Mississippi River, restoring the natural divide between the two basins. **This step requires Congress to amend the Army Corps' current authority and we ask you to lead the legislative effort in making that change.**

### **What is Hydrologic Separation?**

What do we mean when we say hydrologic separation? Simply put, it means making physical changes to the Chicago Waterway System that completely eliminate any direct connection of Mississippi River and Great Lakes waters that might allow invasive organisms to move between the basins. These physical changes can be made at a variety of locations.

What would hydrologic separation entail? The specific method to achieve this separation has yet to be identified, hence the need for a focused study. However, we believe that it will or should involve:

- An evaluation of how the flow of commercial goods through the region's rail, road, and barge transportation system can continue, and indeed, be enhanced through the Chicago Waterway System

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<sup>1</sup> FishPro 2004. Feasibility study to limit the invasion of Asian carp in the upper Mississippi River Basin – final report. Online at [files.dnr.state.mn.us/natural\\_resources/invasives/aquaticanimals/asiancarp/umrstudy.pdf](http://files.dnr.state.mn.us/natural_resources/invasives/aquaticanimals/asiancarp/umrstudy.pdf)

<sup>2</sup> Malchoff, M., *et al.* Feasibility of Champlain canal aquatic nuisance species barrier options. Online at [www.uvm.edu/~seagrant/communications/assets/ansbarrierrprt06.pdf](http://www.uvm.edu/~seagrant/communications/assets/ansbarrierrprt06.pdf).

- A focus on new infrastructure, including physical barriers to stop invasive species and intermodal transfer facilities at points in the canal system that are most advantageous for improving the efficiency and sustainability of Chicago's transportation system
- An exploration of separation scenarios that are designed to expand economic opportunities in the Chicago region and ultimately reduce costs and shipping time for all businesses that move freight through Chicago
- A plan for expanding, not limiting, recreational boat access to the Chicago Waterway System and Lake Michigan
- A recognition that changes to the system's hydrology will likely include upgrades to wastewater treatment and storm water routing, which have the potential to improve water quality and reduce flooding
- An assessment of the potential economic benefits to the regional economy and workforce as a result of the infrastructure investment involved in hydrological separation
- An acknowledgement that there will be changes to the traffic flows of commercial and recreational vessels.

Hydrologic separation does not mean that:

- Commercial shipping stops;
- Recreational access to Lake Michigan is cut off;
- All navigational locks are closed; or
- Flooding will increase in severity.

Rather, if well planned, separation will result in investments in new infrastructure that will benefit both the economy and the environment of Chicago and the entire Great Lakes and Mississippi region.

### **Conclusion**

As you know, Asian carp have been swimming towards the Great Lakes since the early 1990s when they escaped southern fish farms during severe floods on the Mississippi River. They have been swimming north ever since. In late November 2009, scientists announced they had discovered Asian carp DNA upstream of the electric fish fence—about six miles from Lake Michigan and nearly 20 miles closer than previous tests had shown. More recently, Asian carp DNA has been found in at least three of the five channels that connect the canals to Lake Michigan and in Calumet Harbor – in Lake Michigan itself.

We now have a once-in-a-lifetime opportunity to permanently solve the problem of Asian carp and other non-native species moving between the Mississippi River and the Great Lakes via the Chicago Waterway System: the re-introduction of the hydrologic (i.e., physical) separation between the Mississippi River and the Great Lakes. This action has broad-based support of Great Lakes advocates, the Great Lakes Commission and the Great Lakes-St. Lawrence Cities Initiative, both of which have recently passed resolutions calling for the separation of the Great Lakes and the Mississippi River system. We ask you to demonstrate your support as well by ensuring that the Army Corps focuses its efforts on telling Congress and the region not if, but how to make hydrologic separation happen as quickly and effectively as possible.

Sincerely,

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