

# The Great Lakes *Policy Report*

Volume 3, Issue 2,  
April 2014

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Complete**

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The Great Lakes Policy Report is a quarterly news report published by the Little Traverse Bay Bands of Odawa Indians Natural Resource Department's Environmental Services Program. The report features Great Lakes policy updates and relevant initiatives, projects, and issues.

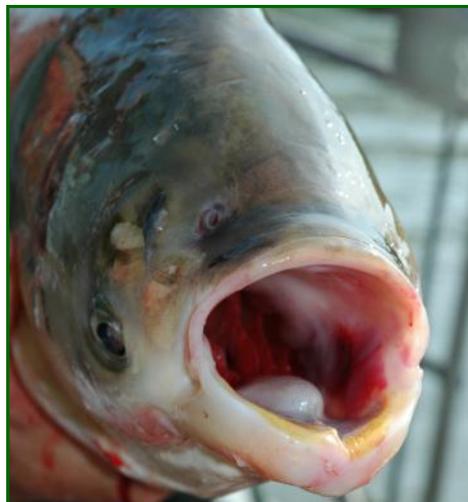
The report is meant to be an educational document, and does not express an opinion on the subjects discussed. Stories and information cited in this report are taken from a variety of sources including news articles, non-governmental reports, interviews, and government documents.

**LTBB Citizens, please consider taking this survey. We want to know what you value when it comes to environmental issues! Go here:**

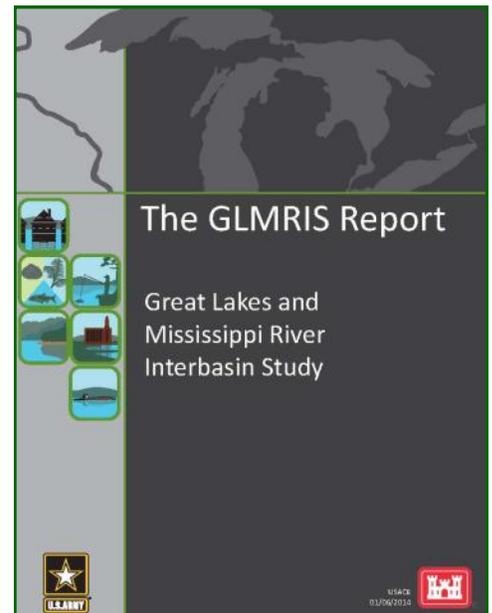
<https://www.surveymonkey.com/s/DNRFJ36>

## Asian Carp and the Great Lakes Mississippi River Interbasin Study Report

Aquatic invasive species (also called aquatic nuisance species or ANS) have been introduced into the Mississippi River and Great Lakes basins as a result of international commerce and other human activities. These two basins are connected by man-made channels that allow the transfer of both indigenous and nonindigenous species. The Great Lakes have approximately 180 non-native and invasive species. Several of these ANS (also called invasive species) have had profound and permanent impacts on the Great Lakes ecosystem. For example, sea lamprey prey on Great Lakes fish and have led to the significant reduction in native fish populations. The invasive zebra and quagga mussels have proliferated through the Great Lakes, causing significant changes to water quality and the foodweb. ANS also have serious economic impacts in the region, from reductions in commercial and sport fishing, to drinking water infrastructure damages.



Invasive Silver Asian Carp.  
Photo Credit: T. Lawrence, GLFC



U.S. Army Corps of Engineers GLMRIS Report

The Mississippi River has also been invaded by a variety of ANS, perhaps most notably by the Asian carp species. In the late 1980s aquaculture farmers along the Mississippi River imported Asian carp to the United States to control unwanted algae growing in their private ponds. However, flooding in the early 1990s allowed these species to escape into the Mississippi River system. Since their introduction, Asian carp have spread throughout the Mississippi River and its tributaries, including the Illinois River, which is hydrologically connected to Lake Michigan through the Chicago Area Waterway System (CAWS) - several man-made channels. Of the Asian carp species, silver carp, bighead carp, and black carp are most likely to significantly affect waterbodies throughout the

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## Asian Carp and the Great Lakes Mississippi River Interbasin Study Report

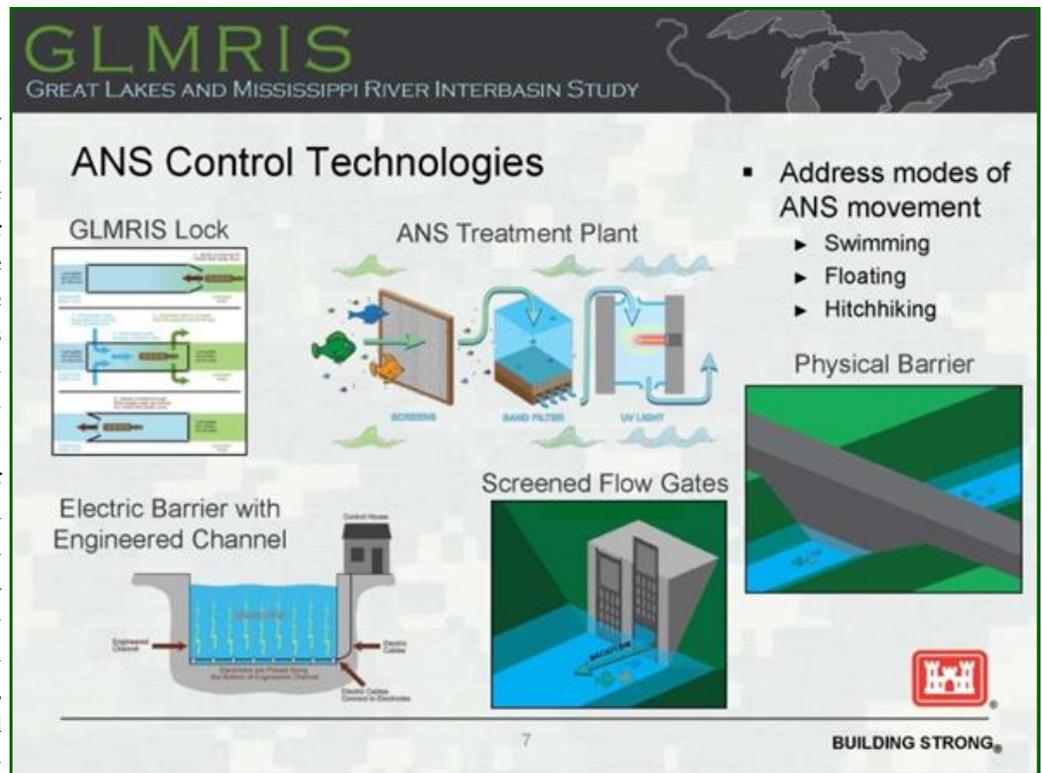
Great Lakes region.

### GLMRIS

In 2007 the United States Army Corps of Engineers (USACE) was directed by congress to initiate the Great Lakes and Mississippi River Interbasin Study (GLMRIS). The study authorized, USACE to evaluate a range of options and technologies to prevent the spread of ANS between the Great Lakes and Mississippi River through aquatic pathways. Through the course of the multi-year study USACE has identified thirteen ANS of Concern already established in one of the two basins that posed a high or medium risk of adverse impacts if transfer to the opposite basin occurred. As part of this study, USACE has conducted a detailed analysis of various ANS control technologies (see photo), including hydrologic separation. The recently released GLMRIS report analyzes the

effects each ANS control, or combination of ANS controls, may have on current uses of: i) the CAWS, a permanent aquatic pathway between the Great Lakes and Mississippi River basins; and ii) other perennial aquatic pathways between these basins.

Of particular note, the study found the closure of the CAWS may be the most effective method to prevent ANS transfer. Unfortunately, such closure is complicated by its multi-functional use. The CAWS is a navigation waterway and is the primary path for shipping cargo, commercial transportation, and recreational uses. The CAWS' original purpose was for water supply and conveyance which remains a necessary function today. It is used to transport municipal wastewater downstream, away from the city of Chicago's drinking water source: Lake Michigan. The CAWS also supplies water to industrial users. Lastly, the CAWS is used to manage the greater Chicago area's flood issue. Both storm water and combined sewer overflows have become a threat to infrastructure and public health. The CAWS is able to reduce the impact of both issues by absorbing water during excessive rain events. Significant improvement to sewer and drainage infrastructure is required to permanent-



GLMRIS ANS Control Technologies were developed as part of the GLMRIS Study Process to prevent or reduce the risk of ANS transfer between the Great Lakes and Mississippi River Basins. Credit: USACE

ly separate the Mississippi and Great Lakes Basin at this location.

### GLMRIS Alternatives

The report contains eight alternatives that evaluate potential options to control the transfer of a variety of ANS. Each alternative was developed to a concept-level design and includes cost information. The options concentrate on the Chicago Area Waterway System (CAWS) and include a wide spectrum of alternatives ranging from the continuation of current activities to the complete separation of the Great Lakes and Mississippi River basins. The GLMRIS Report also includes an analysis of potential impacts to uses and users of the CAWS, and corresponding mitigation requirements for adverse impacts to functions such as flood-risk management, natural resources, water quality, and navigation. The following is a brief overview of each alternative in the report.

**Baseline Alternative – Sustained activities.** Under this alternative no new federal action would result from GLMRIS. Federal and state agencies would continue current efforts of monitoring, control, and eradication of various ANS, such as the Asian carp.

**Nonstructural Control Technologies Alternative.** Under this



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alternative ANS controls that do not require construction of new structures would be implemented. For example, chemical controls, public awareness campaigns, and law enforcement activities could provide some control of ANS transfer. This alternative can be implemented immediately and has a estimated cost of \$68 million annually.

**Flow Bypass Alternative.** This alternative would maintain existing water movement through the CAWS, but two GLMRIS locks would be installed to prevent and/or reduce ANS transfer between the basins. The estimated time to completion is 25 years with a total cost of \$15.5 billion.

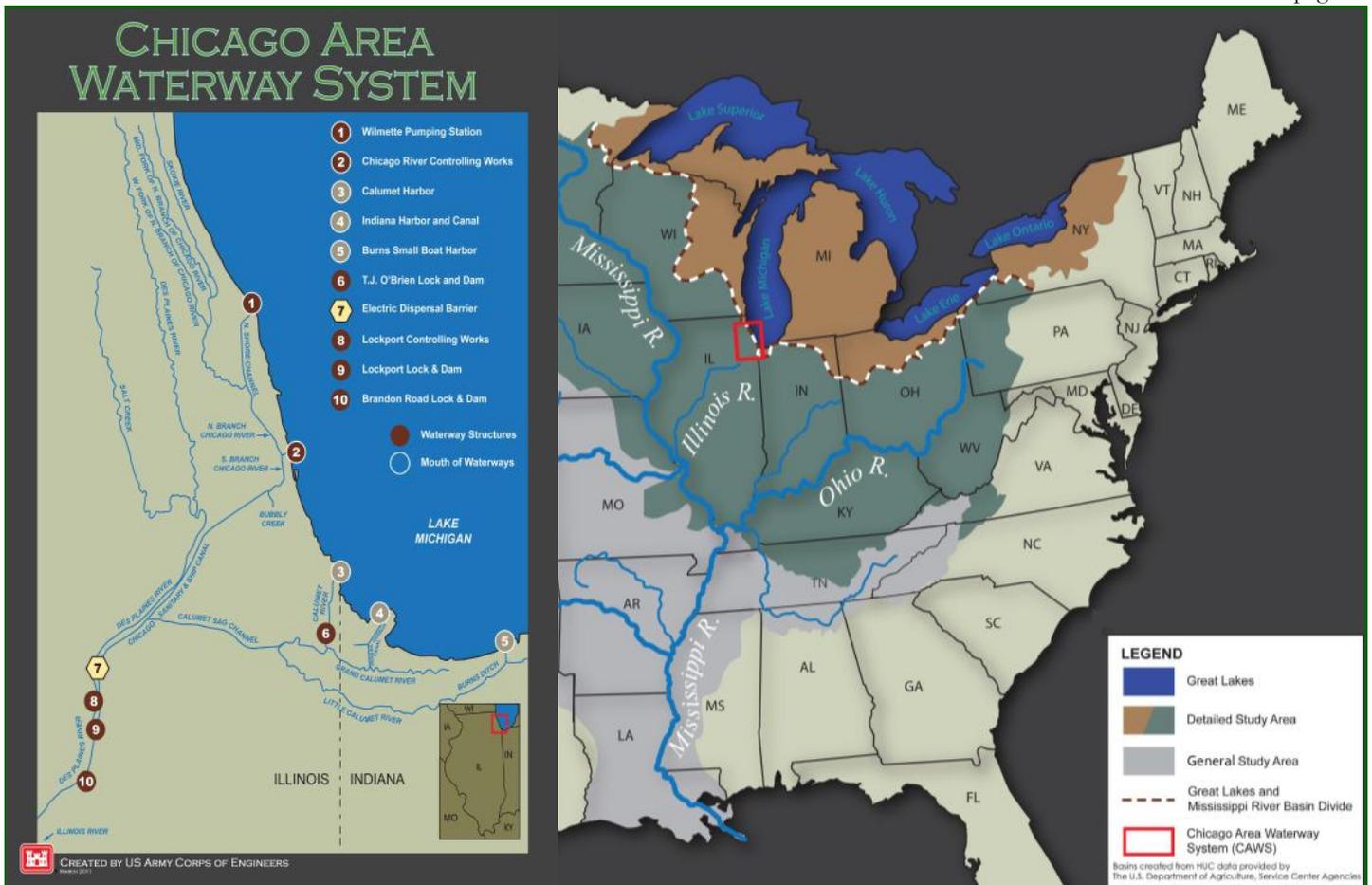
**CAWS Buffer Zone Alternative.** This alternative would implement several GLMRIS control technologies in the CAWS, including locks, ANS water treatment systems, and physical barriers. The estimated time to completion is 10 years with an estimated cost of \$7.8 billion.

**Lakefront Hydrologic Separation Alternative.** This alternative would result in four physical barriers being installed in the CAWS close to Lake Michigan—physically separating the water of the two basins. The two basins would be completely separated without any water transfer. The estimated time for completion is 25 years with an estimated cost of \$18.4 billion.

**Mid-System Hydrologic Separation Alternative.** Under this alternative two physical barriers would be installed in the CAWS and result in the complete separation of the two basins. This alternative would also result in more storm water and sewer water being released into Lake Michigan. The estimated time for completion is 25 years with an estimated cost of \$15.5 billion.

**Hybrid – Cal-Sag Open Alternative.** This alternative combines control technologies with three physical barriers. The CAWS would be open to Lake Michigan at one location in Illinois and barriers

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GLMRIS Study Area Map. The Study focused on the aquatic connections (transfer points) between the two basins but increased attention was given the CAWS. Credit: USACE

# GREAT LAKES POLICY WATCH

In this section you can find current legislation and proposed regulations related to the Great Lakes. When applicable public comment periods and information on how to comment will be given.

## Rules and Regulations

Michigan Senate Bills 795 - 799 would increase penalties for criminal violations involving prohibited aquatic invasive species. Specifically the bills would increase prison time and fines for illegally introducing prohibited aquatic invasive species into Michigan's waters. Prison time would increase from up to two years to up to three, and fines could increase by as much as \$80,000. They also state that property used in a criminal violation involving non-native aquatic species can be seized and fishing licenses can be suspended.

U. S. House Bill 4001 - Defending Against Aquatic Invasive Species Act of 2014 was introduced into the U.S. House of Representatives on February 5th 2014. The bill authorizes the U.S. Army Corps of Engineers to carry out projects necessary to separate the hydrologic connection between the Great Lakes and the Mississippi River basins to prevent the interbasin transfer of aquatic invasive species. More information can be found at <https://www.govtrack.us/congress/bills/113/hr4001>

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would close shipping paths through Indiana. The estimated time for completion is 25 years with an estimated cost of \$15.1 billion.

**Hybrid – CSSC Open Alternative.** This alternative combines control technologies and one physical barrier but attempts to minimize impacts to users such as shipping interests. The CAWS would be open to Lake Michigan in Illinois but not in Indiana. The estimated time for completion is 25 years with an estimated cost of \$8.3 billion.

### **LTBB's Role**

LTBB has been actively involved in the Asian carp issue for several years. LTBB has held the position that physically separating the Great Lakes and Mississippi River basins at the CAWS is the preferable way forward. LTBB has held that physical separation (also called hydrological or ecological separation) is the best option to prevent cross basin invasive species transfer. Included in LTBB's activities on the subject are:

- CORA Resolution 12-17-09 "Protect Great Lakes Watershed From Asian Carp;"
- LTBB requested a meeting with USACE, USFWS, White House Council on Environmental Quality, which was held in September 2012, the meeting included a tour of the electric barrier site south of Chicago;
- Additionally, Consultation with federal agencies in 2010, as well as attending public meetings has occurred over the years.

### **Current and Future Actions**

GLMRIS did not offer a "preferred alternative" or option as many environmental assessments do. USACE has often said that dealing with ANS and the CAWS not a decision that it can make on its own. Without consensus from the majority of the Great Lakes region on the path forward, it is unlikely this issue will be solved. It will require the Great Lakes Community as a whole to come up with the appropriate actions. This issue is not only an environmental or Treaty Rights issue, it is also a political, economic, and local (Chicago, northern Indiana) issue. There are many stakeholders with interest in how, if at all, the results of the GLMRIS report are implemented toward a solution. Tribal Nations, states, nongovernmental organizations, industry, and the general public of the region all have an interest in the actions to address ANS in both basins. The USACE recently concluded comment period on GLMRIS, asking all entities interested in this issue to comment on the study and more importantly how they would like to see this issue move forward. Results of those comments should be released soon. As important as public input on GLMRIS is, congressional approval will ultimately be required before implementing any of the proposed alternatives or other critical actions. Public participation is therefore as important, if not more, now than it ever has been, and perhaps ever will be, on ANS and the health of the Great Lakes ecosystem.

For more information and to view the full report visit USACE's GLMRIS website: <http://glmr.is.anl.gov/>



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