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## Great Lakes Forever Fact Sheet: Invasive Species

**Contact:** Jeffrey Potter, Biodiversity Project  
608-250-9876, [jpotter@biodiverse.org](mailto:jpotter@biodiverse.org)  
Roger Germann, Shedd Aquarium  
312-692-3265, [rgermann@sheddaquarium.org](mailto:rgermann@sheddaquarium.org)

Aquatic invasive species, sometimes called nuisance, noxious, or harmful alien species, primarily arrived in the Great Lakes as a consequence of human activity. These plants, animals and pathogens are dangerous because they threaten the native biodiversity and ecosystems that sustain life in the region. When it comes to invasive species in the Great Lakes, we are paying for the mistakes of the past – more than 160 aquatic invasive species now call the Lakes home.

Sometimes called “biological pollution,” invasive species can cause irreversible harm. The loss of native biodiversity could cause regional extinction of many species that have survived in this region for millennia. Invasive species add an economic burden to our communities, too. The stakes are high, and so local, state and national governments are spending billions of dollars each year in an effort to contain the problem and protect the native ecosystems that support our way of life. Unfortunately, the high cost of controlling these invaders is borne primarily by tax-payers, not those who bring them to our shores.

While most invasive species arrived in the Great Lakes region by accident, some invasive species were intentionally introduced to the region in an effort to solve other problems, such as over fishing. Today, the greatest source of aquatic invasive species in the Lakes is an unintentional one: ships’ ballast water. Cargo ships carrying about 15 million tons of goods to and from Great Lakes ports every year rely on “ballast water” to help stabilize their ships at sea. When these ships pick up new cargo, they can dump tens of thousands of gallons of ballast water – often taken from distant waters – into the Great Lakes. Even the tiniest microscopic organisms found in this ballast water can take hold and cause a significant disturbance in the Lakes.

It is unlikely that the many invasive species we have in the region will be eradicated, but with concerted effort and financial commitment they can be managed and, in certain cases, contained. In Chicago, the Asian Carp barrier is one example of how creative technology and government partnerships can protect the Great Lakes from new invaders. These large carp (weighing up to 110 lbs.) were imported into the United States for use in aquaculture ponds in southern states. Flooding allowed some to escape and enter the Mississippi River - a direct conduit to the Great Lakes via to the historical construction of the Chicago Sanitary and Ship Canal, which connects these two major watersheds.

If Asian carp enter the Great Lakes, they are expected to become a dominant species due to their broad diet and high reproductive rates and a lack of predators. Asian carp consume huge amounts of the same food eaten by native fishes, aggressively out-competing and eventually displacing them altogether. The Asian Carp Barrier is an electric field designed to prevent the carp from entering the Chicago Sanitary and Ship Canal and moving into Lake Michigan and all of the Great Lakes.

Outdoor enthusiasts, from hunters and fishers to boaters and swimmers play an important role in controlling some invasive species on the waterways that feed the Great Lakes. Invasive species, from zebra mussels to Eurasian watermilfoil, spread through the seeds, roots, other organisms that stick to boats, tires, shoes and gear. A little extra time on the dock to clean boats, four-wheelers, footwear, and feet before moving from one water body to another can cut this growing problem.

Stopping invasive species from entering the Great Lakes through ballast water on cargo ships is more difficult; it's a problem that requires international and national regulations and enforcement. A decade ago, the federal government legislated steps to combat invasive species introductions from cargo ships, but both enforcement of the law, and the law itself fell short of eliminating the total problem. The Coast Guard's enforcement of federal legislation omitted the vast majority of ships entering the Great Lakes, an error that is currently being reconsidered. And almost everyone agrees that new federal legislation with more robust regulation of ballast water discharges, which also addresses other vectors, such as canals and commercially imported species, is needed to fully protect the nation's waters.

Recently, revamped policy in the form of the National Aquatic Invasive Species Act (NAISA) has been re-introduced in Congress. NAISA provides a comprehensive approach to preventing the introduction of more aquatic invasive species to all waters of the United States.. It includes a national mandatory ballast water management program and addresses other ways by which ships introduce additional species NAISA also includes early detection, rapid response, control and outreach strategies to combat aquatic invasive species; and it provides for federal funding for research. Overall, federal funds of approximately \$170 million could be made available for aquatic invasive species prevention, control and research.

Currently, NAISA is pending in Congress. Nonetheless, support for NAISA and the protection of the Great Lakes region from further infiltration by invasive species is growing. As scientist Dr. Phyllis N. Windle of the Union of Concerned Scientists observed in 2002, underestimating the impact of invasive species is akin to playing "ecological roulette with the Nation's resources." With NAISA, policymakers have created a tool to reinforce the resolve to protect our aquatic ecosystems – a tool that should be used as soon as possible.

Controlling invasive species in the Great Lakes brings benefits for recreation, the economy, wildlife and the Lakes themselves. All of us – individuals, industries and municipalities – can take individual and local action now and also urge our legislators to better protect this remarkable resource:

**Support Strong Invasive Species Legislation.** The Great Lakes are a treasure and so they should be carefully protected. Write your government representatives and tell them that you support strong and responsible protection against invasive species in the Great Lakes. There are competing bills in Congress that contain weaker protections, please ask them to co-sponsor the National Aquatic Invasive Species Act.

**Inspect Personal Watercraft and Gear.** Although strong legislation is an important step in controlling invasive species, everyone in the Great Lakes basin should be conscious of the problem. You can help limit the spread of invasive species in Great Lakes tributary rivers and inland lakes by carefully inspecting your boats and gear **every time** you move your boat, fishing gear, four-wheeler and even your feet from one water body to another. Make sure you wash them thoroughly. Invasive species, from zebra mussels to Eurasian watermilfoil spread through the seeds, roots, other organisms, and plant matter that stick to boats, tires, shoes and gear.

**Plant Native Species at Home.** The Great Lakes region is home to an endless supply of beautiful native plants, flowers and trees. Save money and trouble when you choose native plants for your lawn and garden. Native plants are accustomed to local soil types, weather patterns, pests and diseases. Not only are they beautiful to look at, they support natural wildlife and they take less work to maintain. Talk to your local state university horticulture extension agent or nursery for recommendations.

For more information on the Great Lakes, tips and more, visit [www.greatlakesforever.org](http://www.greatlakesforever.org). Great Lakes Forever is a public education initiative launching this June by the Biodiversity Project to raise awareness of the ecological value of the Great Lakes and concern about the threats to the ecosystem's health.

*Biodiversity Project advocates for biodiversity by designing and implementing innovative communication strategies that build and motivate a broad constituency to protect biodiversity. A national organization based in Madison, Wisconsin, the Biodiversity Project has worked with leaders in policy, advocacy, education, science, religious and grantmaking fields since 1995. For more information, visit [www.biodiversityproject.org](http://www.biodiversityproject.org) and [www.greatlakesforever.org](http://www.greatlakesforever.org).*