

AQUATIC INVASIVE SPECIES STOPPING THE SPREAD

Invasive species cost the public more than \$137 billion annually. Proven technologies like invasive fish barriers and deterrents, such as bioacoustic fish fences, gas bubble screens, and electric fences, along with traditional physical structures on interjurisdictional waterways and waters of regional and national importance are used to prevent the spread of AIS.

Scientists are developing innovative risk assessment technologies, prevention strategies, species history/ecological data, and cost-effective, environmentally sound options for managing aquatic invasive species.



The Great Lakes provide the backbone for a multisector \$6 trillion regional economy that includes a \$7 billion commercial and sport fishing industry and a \$15 billion recreational boating industry. These fish have the ability to reproduce rapidly, consume large quantities of food, and would disrupt the food chain that sustains Great Lakes fisheries if they were to become established in Lake Michigan.

In 2007, Congress authorized the US Army Corps of Engineers to study these carp and other aquatic invasive species (AIS). In 2015, the Brandon Road Lock and Dam, located 27 miles southwest of Chicago at Grafton, Illinois, was identified as the site for enhanced efforts to prevent the upstream transfer of AIS. It was only in 2021 that the Bipartisan Infrastructure Investment and Jobs Act provided the Army Corps of Engineers with resources to finish planning and begin construction. The project features technologies such as a flushing lock, an engineered channel with electric barrier, underwater acoustic deterrent, air bubble curtain, and an automated barge clearing deterrent to minimize movement of AIS.



Sea lampreys are native to the Atlantic Ocean. In the 1880s, they entered the Great Lakes, where they had no natural predators or population controls, through locks and shipping canals. Sea lampreys grow to 24 inches long and feed entirely on other fish. Lake trout are particularly susceptible to sea lamprey predation. The main method of control, a pesticide that kills lamprey larvae, is successful, but expensive. Many different types of barriers are also in use and under development, including velocity, electrical, and adjustable crest barriers. Other methods of lamprey control include releasing sterile male lampreys that compete with fertile males and therefore lower the overall reproduction rate in a particular area.

FEDERAL INVESTMENT IS CRITICAL

Federal appropriations and reduced cost-share requirements, particularly for projects that span many jurisdictions, are essential for coordinated prevention, detection, management, and eradication of AIS.

Federal funding to boost research and pioneer innovations in AIS prevention, detection, management, control, and eradication and their pathways has proved successful and should be enhanced. A single federal research fund for AIS management and control should be established, and the appropriate federal agency selected, to support research funding across agencies.



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