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Invaded waters: A sea of red tape

Tom Meersman, Star Tribune

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CHICAGO -- At first the idea seemed like a long shot: Stop invasive fish from swimming south by installing an electric "fence" in a busy shipping canal southwest of Chicago.

Scientists desperately wanted to halt a pugnacious and prolific bottom fish called the round goby. It invaded the Great Lakes from the Black and Caspian seas of Asia, taking over the territory of native fish -- and by 1996 it was poised to enter the Illinois River through the canal.

A barrier, with underwater cables to shock the fish, might keep the gobies in Lake Michigan.

But the government delayed -- and the gobies didn't. When the \$1.2 million fence was activated in 2002, the gobies already had passed it, on their way into the Mississippi basin.

The story of the goby is one of several examples of how inaction or delays by federal agencies have contributed to an ecological crisis in the Great Lakes and beyond.



Asian carp, which escaped from fish farms in the 1980s, have clogged the Mississippi River system.

Marlin Levison
Star Tribune

The lakes are fighting for their life against at least 179 foreign fish, plants and other creatures. Invaders are dominating or destroying native creatures at a pace that has alarmed biologists. Yet the official response has been stunted by political interference, budget shortfalls and lack of clear responsibility among government agencies.

In the case of the electric fence, the U.S. Army Corps of Engineers took six years to build it, twice as long as expected. It has had a succession of six managers, and it was built with cheap materials that are already wearing out.

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A silver carp jumped out of the Illinois River in central Illinois.

Marlin Levison

Star Tribune

Corps officials concede the project took too long, but say the technology was new and unusual.

Overall, U.S. efforts against aquatic pests have been underfunded, unfocused and ineffective, according to the General Accounting Office, the investigative arm of the federal government.

The U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service and the U.S. Coast Guard all have delayed or sidestepped regulatory action related to invasive species.

The government spends \$35 million a year on aquatic invasive species research and programs, about a third to control sea lampreys.

U.S. officials say that they don't have enough money to do the job, that it takes years to impose regulations, and that existing laws are geared to control chemicals, not alien organisms.

In Canada, it is much the same. No agency is focused on invasive species, leaving the government with no sense of the magnitude of the problem and no priorities to deal with it, Canada's Auditor General reported in 2002. The government says a plan is in the works.

Free pass into rivers

The electric barrier project was a low priority for the corps, according to Phil Moy, its first manager, who now is a fisheries specialist with the University of Wisconsin Sea Grant program. The tiny goby drew little public interest, and the project barely registered on the corps' agenda, which is typically crowded with dredging and reclamation projects, he said.

The barrier also was experimental. Roy Deda, deputy administrator for project management in the Army Corps' Chicago District, said that's why it took so long to build. "I'm not going to say that it couldn't have been done quicker, but there certainly were a lot of challenges on the way to getting it to construction," he said.

Congress slowed the flow of money to the project after a couple of years, according to Moy. It was finally built with cheaper materials for a fraction of the original \$4 million estimate.

That was a huge disappointment for David Jude, the University of Michigan research scientist who first identified round gobies in the Great Lakes in 1990. He said that the gobies' free pass into the U.S. midsection will be a problem because the fish gobble up the eggs of many native fish, including bass and sturgeon. Jude said gobies absorb pollutants by eating another invader, the zebra mussel, and can pass the contamination to fish that people eat.

Although the fence was too late to stop the gobies, officials

completed it in the hope of repelling two species of Asian carp that are moving in the opposite direction. Bighead and silver carp are swimming north in the shipping canal, and they are only about 50 miles from Chicago and entry to Lake Michigan.

The approaching carp set off political alarm bells, mainly because of the invaders' potential to devastate the Great Lakes fishery, estimated to be worth \$4.5 billion annually. Chicago Mayor Richard M. Daley became a carp-barrier advocate last year and the Illinois legislature committed nearly \$2 million on top of the \$5 million that the Army Corps promised to build a larger, better fence.

Early this year, the corps' Deda said the second barrier was a top priority and "on the fast track" to be constructed this summer. But corps officials in Washington, D.C., had a different idea. They soon stripped from their budget most of the money needed for the barrier, because officials said the funds were needed for other domestic projects. After protests by the Illinois congressional delegation and others, the corps restored the money in March and construction is expected to begin in a few months.

Invasive hitchhikers

Electric barriers won't stop creatures that arrive on ships from foreign ports -- the most common pathway into the Great Lakes.

For years, Coast Guard officials have been working on improved standards for removing alien species from ships' ballast-water tanks. These tanks keep ocean-going vessels stable, but may hold foreign organisms that can be released during loading at U.S. and Canadian ports.

Even when empty, the tanks contain residual water and mud that carry plenty of organisms, researchers have found. Yet empty tanks are unregulated.

If the government develops technical standards, the shipping industry could be required to use filters, chemicals or other technology to get rid of virtually all invasive hitchhikers in the ballast tanks.

The Coast Guard says it doesn't know how much longer it will take to the finish this regulatory process.

Rep. Vernon Ehlers, R-Mich., said the Coast Guard has "failed miserably" in regulating ballast water, despite directions to do so in a 1996 federal law. "They have tended to side with the shipping industry," said Ehlers, who wants to set a deadline to impose new rules. "They just don't have their heart in it."

Coast Guard Lt. Cmdr. Kathy Moore denied that officials are dragging their feet. She is the chief of the agency's Environmental Standards Division in Washington, D.C. Moore said that aquatic invasive species are the Coast Guard's top environmental issue.

Any changes in regulations must be justified by legal analysis, economic and environmental studies and opportunities for public comment, she said. That process contributes to the agency's "perceived delay," she said.

Shipping industry officials say that it will take years to find practical ways to remove invaders from ballast water of foreign vessels. Domestic ship operators in Lake Superior, in the

meantime, are trying to avoid inadvertently carrying recent invaders from port to port. Some captains limit the amount of ballast water they take from infested ports, or use high-speed pumps rather than gravity to reduce the chances for fish to enter the ballast tanks. The program is voluntary.

Doing nothing

Deciding to do nothing also can take time.

For the EPA, it took 4½ years. That's how long the agency studied whether existing laws required it to start regulating ships that dump ballast water into harbors.

Environmental and fishing organizations in 1999 had asked the EPA to take on the job. They argued that the Clean Water Act, which the EPA enforces, protects the "biological integrity" of the Great Lakes.

The job of stopping aquatic invaders aboard ships had been left to the Coast Guard, whose mission also includes navigational safety and homeland security. Surely, the organizations argued, the EPA was better equipped than the Coast Guard to deal with the lakes' environmental issues.

In September, the EPA decided it would not regulate ships' discharges, confirming a long-established agency policy that exempted military and commercial ships from several pollution rules.

Suzanne Schwartz, director of the EPA's Ocean and Coast Protection Division, conceded that invasive species are a significant pollution threat, and that the Coast Guard has not dealt with the shipping problem "as quickly as we and other people would have liked."

But Schwartz said that the Coast Guard has the staff and expertise to regulate ships, and that it has accelerated work on the problem. "The Coast Guard is moving forward, they are working very closely with us, and frankly we didn't feel it would expedite anything to change leadership or change authorities," she said.

That explanation doesn't satisfy Linda Sheehan, director of the Pacific regional office for Ocean Conservancy, one of the 15 groups that asked the EPA to step in. She said the EPA, which monitors biological pollution on beaches, can't pick and choose what it regulates under the Clean Water Act.

"I think EPA has been negligent," Sheehan said. The Ocean Conservancy and two other groups challenged the EPA in late December in U.S. District Court in San Francisco.

Delay about carp

One of the looming biological threats to the Great Lakes won't need a ship to get there.

Asian carp, including the voracious bighead and silver species, have been eating their way up the Mississippi River and its tributaries for two decades - ever since they escaped from fish farms in the early 1980s.

Even though the Army Corps is building a second barrier near Chicago to block these alien predators, another government agency - the Fish and Wildlife Service - has ignored warnings from wildlife experts to regulate trade in such fish.

With no significant predators, Asian carp have virtually taken over some river stretches from native species. Silver carp, which have colonized parts of Illinois and Missouri rivers, jump high out of the water when disturbed by motors, and have injured boaters, some of them seriously. The first bighead was caught in Minnesota waters in Lake Pepin last October.

Scientists have warned about these fish for more than two decades, since commercial fish farmers imported them to clean huge catfish ponds and prevent fish disease. Two species escaped into rivers, and a third--the black carp--has been found in the wild, but it's unclear whether it is established.

To protect native fish, a coalition of state fisheries managers petitioned the Fish and Wildlife Service in February 2000 to prohibit the interstate transport of black carp by adding it to the federal "injurious species list."

Five months later, fish farming industry officials met privately with Jamie Rappaport Clark, who was then director of the service. The lobbyists confirmed in later interviews that they complained about the petition and an agency employee who had helped prepare it. Four weeks later the employee's job was eliminated and he was reassigned.

The agency has not acted yet on the petition to list the black carp.

Two years later, 25 members of Congress wrote to the wildlife service urging restrictions on bighead, black and silver carp. Their letter said the carp threatened to enter the Great Lakes and permanently damage the fishery. Seven other legislators, including Rep. Jim Oberstar, D-Minn., added their names last month.

Fish farmers vigorously oppose the restrictions as unnecessary and harmful to the aquaculture industry. Agency officials said recently that they are evaluating the congressional request, as required for any new rule.

By contrast, it took only a few months for the agency to declare the northern snakehead fish injurious and to ban its import. That happened in 2002, after the snakehead showed up in a Maryland pond. The fish, native to China, has canine-like teeth and can wriggle across land to look for food -- qualities that captured the imagination of the public and Congress.

The efforts to block the carp and gobies are small skirmishes in what scientists see as a larger war.

Phyllis Windle, senior staff scientist for the Union of Concerned Scientists, said that battle strategies need to change.

"It's hard for me to see that this continuing, piecemeal, one-species-by-one-species approach is going to get us where we need to go," she said. "There's been no real fundamental change in the last 30 years in the way the U.S. thinks about the damages of these species and how important it is to prevent them."

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