

'Carp cowboys' round up invasive Asian carp as Illinois, federal officials debate measures to protect Lake Michigan

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On a bleak and biting December morning, a team of state-contracted commercial fishermen at Starved Rock Marina slipped into their waders, salted down their johnboats to protect against ice and launched onto the Illinois River.

Armed with thousands of yards of netting, the fleet set course for a cove at Sheehan Island where they suspected a horde of silver and bighead carp, the most abundant and worrisome species of invasive Asian carp, were holed up for the winter.

Within less than a half-hour, the fishermen transformed the inlet, which is big enough to hold Millennium Park, into an enormous booby trap, layering netting from the shores to the mouth of the bay. Once they were finished, the stillness of the muted winter morning was broken by the fishermen collectively revving their motors, driving frenzied Asian carp into the nets.

While state and [federal officials](#) debate costly preventive measures, unreliable electrical barriers near Romeoville serve as the last rampart blocking these Asian carp from entering the Great Lakes. In the meantime, the Illinois Department of Natural Resources has been testing alternative approaches.

Kevin Irons, the manager for the aquatic nuisance species program at the Illinois DNR, has traveled to the Asian carp's native China three times, most recently in October. There, he learned how teams of fishermen methodically captured the [fish](#) each year by strategically casting their nets to divide waterways and scoop up carp sector by sector in multiday campaigns.

Irons has shared this technique with commercial fishermen contracted by Illinois who have added their own twist. In China, they fish quietly, but Illinois' "carp cowboys" are exploiting the species' fear of loud noises using golf clubs, baseball bats and even plungers to bang on the sides of their boats, essentially herding the fish into their nets—often tens of thousands of pounds at a time.

"Our fishermen didn't quite have the patience. It's kind of like a cattle

drive in the water," he said.

But similar to the Chinese, local fishermen are employing a common strategy and working together over an extended period of time.

"They want to harvest the whole lake. We want to harvest the whole river to remove them, so now we're working together like a small strike team," Irons said.

Ironically, Chinese researchers studying conservation have also traveled to Illinois, in part to study why carp are thriving in the Midwest.

The populations of silver and bighead carp are declining in China, where it is a common food source, and becoming threatened due to a combination of overfishing, pollution and the construction of a colossal hydroelectric dam. The problem has gotten so dire that Chinese officials plan to implement a year-round ban on commercial fishing in the Yangtze River by 2020, Irons said.

In Illinois, current strategies have successfully reduced the leading edge of the Asian carp population by 93 percent since 2012, according to sonar scans. By removing more than 1 million pounds of carp annually in the past several years, the state has contained the adult population to the Dresden Island Pool, 47 miles away from Lake Michigan, near Minooka, Ill.

But computer modeling suggests it's not enough. To repel Asian carp, about four times that amount needs to be removed from downstream.

In February, the state plans to roll out a new pilot program to incentivize more commercial fishermen to sign up to catch Asian carp in the Lower Illinois River near Peoria. Because Asian carp only sell for about 10 cents at market compared to as much as 50 cents for more popular fish,

few fishermen can make ends meet catching carp alone.

But under this new program, the state would pay fishermen an extra 10 cents per pound for Asian carp they take to processors and fish markets. A recent weeklong haul by contracted fishermen in the Upper Illinois River yielded about 60,000 pounds. The ambitious program, which eventually aims to remove 20 to 50 million pounds of Asian carp from Illinois waterways annually, also hopes to rebrand the domestically unpopular fish, widely establishing a fledgling demand for "silverfin" fillets and fish cakes.

The Army Corps of Engineers recently released a final version of its plan to install a gantlet of deterrents, including an electric fence, a bubble barrier and underwater speakers at Brandon Road Lock and Dam in Joliet that the agency believes will ward off adult fish as well as fish eggs. But the controversial project has almost tripled in price to \$778 million.

Even if construction began without a hitch, the development wouldn't be finished until 2025 at the earliest.

Without the infrastructure, there's a 29 percent probability that Asian carp could establish in the Great Lakes by 2071, according to a report by the Army Corps. The fate of the project, which has been supported by environmental groups and Great Lakes fishing organizations, is ultimately in the hands of Congress.

At least one well-known, local fisherman believes not all solutions need to be expensive. Don Dubin, 81, of Lincolnwood, a member of Chicago's fishing advisory board, has suggested fishery managers look into cutting off the Asian carp's food source.

"How does a fish get that big eating microscopic plankton?" Dubin

asked. "I'll tell you why. On both sides of the river, there's lots of farmland. Every time it rains, fertilizer from the field gets into the river, and it creates plankton (that make up algae blooms). If you want to control Asian carp, don't plant crops near river's edge. If you don't have food, you will eliminate the Asian carp."

In the 1960s and 1970s, when government agencies became more mindful of the dangers of using pesticides and chemicals, introducing Asian carp was viewed as a more eco-friendly approach. Filter-feeding bighead and silver carp were stocked into small ponds where farmers raised catfish to control algae blooms.

Though the carp offered some benefits in closed quarters, fishery managers had no idea the havoc they would wreak when floodwaters washed the fish into the open waters of the Mississippi River basin.

The bighead and silver carp, species that can consume 20 to 120 percent of their body weight a day in microscopic plankton, have been proved able to grow up to 100 pounds while native fish have grown leaner. Females can lay up to 1.9 million eggs a year. The easily frightened fish are also known to jump as high as 10 feet out of the water, posing a threat to recreational boaters.

By 1986, Asian carp had stormed into the Illinois River, which researchers say has the highest concentration of silver carp on the planet. As populations of silver and [bighead carp](#) traveled farther upstream, their skyrocketing population has agitated fears that Asian carp could become the next disastrous invader to establish itself in the Great Lakes.

"We started to do the mental math and saying, 'We've got this fish, they've got pretty good numbers in the Illinois River—oh my God, they might get into Lake Michigan,'" Irons said.

On Tuesday, near the banks of Sheehan Island where Asian carp like to take refuge, state-contracted fisherman Shawn Price gunned the engine of his boat while his father hit a wooden stick on the side. Minutes later, Shawn Price began pulling in nets chock-full of Asian carp.

Price has been fishing since high school when he could afford to buy his first gill nets. While he grew up netting catfish, buffalo and gizzard shad, for the past eight years he's been helping the state get a handle on Asian carp.

"They are an interesting creature," Price said, tossing carp in the middle hold of his boat. "They are a fish all their own. They don't follow the same rules most (fish) follow. When they want to be fast, it's hard to get a net around them. And they're super-smart. You can see on sonar the fish in the net, but some fish are jumping in between nets. But when we catch them, their weight adds up way faster because there's way more of them."

And the progress on the Upper Illinois River is evident, Price said.

Asian carp are much smaller than they once were. So much so that Price has had to decrease the mesh size of his net. Last week, most of the silver carp he wrangled were 5 to 7 pounds, much smaller than the behemoth 78-pounders he's netted in the Mississippi River as a part of a separate program.

"Three hundred to 400 used to fill the boat. Now it barely makes the boat look good," he said with a laugh.

With the state fishing program ending for the season this month, Price said he may be lured to work the remainder of the winter in Kentucky where the state provides a 5-cent-per-pound incentive for Asian carp. While subsidy programs are good in theory, Price said state officials

need to keep an eye on the market prices to ensure fish markets aren't taking advantage of the situation.

Price said fish markets will pay less and pocket a larger profit if they know the state is subsidizing the catch.

"The fish market is going to get its cut regardless," Price said. "And that's already happened in Kentucky. Instead of paying the 18 cents they were paying, now they are only paying 13 cents, because the subsidy was a nickel."

What to do with all this fish

Since 2010, much of the Asian carp caught in Illinois has become fertilizer, fish meal for livestock or pet food. Some of it has also been dumped into landfills or exported abroad. But the domestic demand for Asian carp at restaurants and markets has remained thin.

That's due, in part, to the fact that the fish is bony. But experts say the stigma behind the term "carp" has also unfairly lumped Asian carp with bottom-feeding common carp, a species that is widely considered "trash fish."

Bighead and silver carp, however, feed on plankton and have a sterling reputation in China where they are in high demand.

With a new focus on sustainable seafood, "invasivory—the practice of eating invasive species—is becoming a niche area for some, including Louisiana chef Philippe Parola, who has attempted to rebrand Asian carp as "silverfin."

The University of Illinois at Urbana-Champaign has become an early adopter of the practice. After hearing only negative rumblings about the

fish, Kit Smith, Illinois' assistant director of dining procurement, said he was coaxed by a local fish market and tried it out of "morbid curiosity." Smith, a chef by training, was surprised by how much he enjoyed the silverfin fillets, which he said have a taste and texture similar to cod.

Fortunately, he said, the students have been more open-minded. Since fall 2017, the university has turned more than 50,000 pounds of Illinois-caught Asian carp into silverfin fillets and fish cakes for its dining halls, and it has received no complaints, Smith said.

"The college-aged students now, which is pretty much Gen Z, their approach to food is different than previous generations, even millennials," Smith said. "They're more open to different food experiences and trying something different. They're not so much hung up on—oh just because someone said something was bad, they are more likely to try it for themselves.

"That helps out a lot. It opens up what food can be, especially in the Midwest. It doesn't always have to be meatloaf and mashed potatoes all the time."

On June 22, 2017, a lone silver carp was found in the Little Calumet River, nine miles from Lake Michigan, a scare that sparked a two-week dragnet operation called Operation Silver Bullet.

Though no other Asian carp were found in the Chicago-area waterway, the episode put public officials on high alert and galvanized supporters of a federal project to install infrastructure at the Brandon Road Lock and Dam to prevent Asian carp from moving into the Great Lakes.

The projected costs now have climbed to \$778 million, which would be split between the federal government and the Great Lakes states, casting some uncertainty on whether sticker shock might cause some public

officials to withdraw their support. Even when the project was pegged at \$275 million, Gov. Bruce Rauner's administration opposed its construction, citing millions of dollars worth of operating costs that would be shouldered by Illinois taxpayers.

Earlier this year, Michigan Gov. Rick Snyder offered to take on these costs, leaving Illinois to pay a much smaller tab. With about a month left in office, Rauner appears to have essentially tabled the proposal.

Molly Flanagan, vice president of policy at the nonprofit Alliance for the Great Lakes, traveled to Washington, D.C., last week to meet with federal lawmakers. But she said cooperation with legislators in Springfield will be paramount if the project is to move forward.

"Gov. Rauner's administration has largely been an obstacle to progress at Brandon Road, downplaying the risks of Asian carp getting into the Great Lakes and questioning the need for additional protection beyond nonstructural measures," Flanagan said. "Gov.-elect Pritzker and his administration will have a chance to establish Illinois as a leader in efforts to block Asian carp. He can really take Illinois from obstacle to champion."

Rauner's successor, J.B. Pritzker, who will take office in January, has yet to take a stance on the project.

"JB understands the importance of protecting the Great Lakes' marine habitat," Pritzker spokeswoman Jordan Abudayyeh said in a statement. "That's why members of his Powering Illinois' Future transition committee are discussing solutions for a variety of energy and environmental issues facing Illinois, including Asian carp."

Illinois U.S. Sen. Tammy Duckworth, a member of the Committee on the Environment and Public Works, which oversees issues related to the

nation's waterways and infrastructure, has pledged to back the project.

"Invasive species like Asian Carp are a growing threat to the Great Lakes and its vibrant \$7 billion fishing industry, which supports thousands of jobs and families across our region," Duckworth said in a statement Wednesday. "We need to do what we can to protect these families' livelihoods and preserve our native species, which is why I have been working to support efforts like the Brandon Road project and ensure we are using the best available science in the most effective way possible."

Some experts have speculated that even if Asian carp breach Lake Michigan, they won't have enough plankton to survive because invasive zebra and quagga mussels have depleted the plankton. Others argue they could simply hover around the shoreline where plankton is abundant, possibly spreading to rivers in neighboring states.

So far, the removal efforts by a small band of commercial fishermen have been extremely encouraging, especially considering how far they've come since initiatives to remove Asian carp first started.

"In those eight years, we've come a long way," Irons said. "We have a high confidence knowing where these population of fish are, and we should be able to fish from realistic, logical strategies to fight carp now. We shouldn't be fearful. We understand their behavior.

"Now, that's not to say because of progress we can just stop. I tell people it's like cutting the grass, because if you don't do it regularly, the fish will come back."

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