Too Many Carp: How Sauk Lake Is Addressing The Issue

Big Sauk Lake on the Sauk River in Todd and Stearns counties is 2,100 acres in size and stretches six miles north out of Sauk Centre, Minn. The lake is popular among recreational boaters and is a favorite destination for walleye, panfish and bass anglers. But it contains too many carp—way too many!

Estimates based on scientific methodology indicate there are 4 to 12 times more common carp by volume (expressed in pounds-per-acre) than what's generally recognized as the accepted threshold. The issue isn't a new one.

In 2009, after simple observations, angler reports and a noted disappearance of aquatic vegetation made it obvious that the carp population was excessive, the board decided to act.



"We raised enough money to try and net carp from the lake," said long-time resident and Big Sauk Lake Association (BSLA) board member Jeff Mayer. "About 54,000 pounds of fish were removed that winter."

After that, intermittent commercial harvesting occurred but didn't seem to stem the tide. So, the board decided to take a different tack in 2019. "We started working with WSB Engineering," said Mayer's fellow board member Mike Disher. "This organization employs a broad integrated

approach that includes electrofishing and radio tracking to get a better understanding of the population size and how the fish behave."

WSB is a Minnesota-based consulting business that works with communities on road, bridge, natural resource and other types of projects across the country. Tony Havranek is its Director of Fisheries.

"While we work with a variety of fish species, we have a special focus on common carp," he explained, "and we've developed our approach into a streamlined best management practice that we can adapt to any type of client—cities, counties, lake associations, native tribes—and fit it to an individual lake, multiple lakes or an entire watershed."

Establishing and maintaining the environmental integrity and good water quality to support designated uses of an aquatic system requires looking at a number of factors, Havranek explains, such as pollution load, storm water management, and lawn care and agriculture practices. Carp management isn't a factor on every lake in terms of improving water quality, but on Big Sauk, it is.

"We had anecdotal information such as Minnesota DNR lake surveys and commercial fishing documents that confirmed the carp population was high," he said, "but we used two methods—electrofishing and mark-andrecapture—to obtain a better sense of the population density."

The counts showed that carp density in Big Sauk Lake is at least 4, and as high as 12, times higher than the generally accepted threshold of less than 89 pounds per acre for a healthy lake. The goal for Big Sauk would be about 50 pounds, according to Havranek, to allow a buffer in the event of an unexpected surge in spawning success for any reason.

"Achieving that goal is a multi-year project, though," he said, "and we're just now taking the first steps."

Among those steps was the insertion of a high-frequency radio transmitter into 12 individual fish. "It doesn't sound like a lot, but they do provide the information we need. Lake association members and other volunteers were trained to use radio receivers to locate the fish any time of year; we're especially interested in where most of them go to spawn in the spring, and where they congregate in the winter so we can target them for large-scale removal with under-ice nets."



One of the carp that was fitted with a radio transmitter that allows volunteers to locate preferred spawning sites and wintering areas.

"It was surprising to me that we found implanted fish from Sauk Lake 15 miles up Ashley Creek (a 30-mile-long tributary that empties into the lake from the southwest)," said Disher, who along with Mayer, is among the volunteer trackers.

March 2022 saw the first removal effort under the new system, resulting in 51,000 pounds of carp taken and shipped alive to consumer markets in the East.

"It was a major operation," said Bob Mueller, BSLA board member. "They used sonar to pinpoint large schools in two different areas, then cut long holes in the ice for the nets."

Underwater audio speakers and ATVs driven strategically over the surface herded the schools into the nets, he explained, and the nets were pulled.

"We're very thankful for all the people from the community who came out to help," Mueller added. "It's a lot of work, but very much worth the effort." Winter carp removals will continue for the foreseeable future, according to Havranek, but carp management on Big Sauk won't stop there. The BSLA and WSB are working to obtain state funding for the installation of Passive Integrated Transponder (PIT) stations at strategic locations, which would allow them to track hundreds of fish with much less effort and expense.



Submersible speakers are used to herd carp into a waiting net.

Information gained from the PIT stations would then dictate the best places to install a carp barrier, which can exclude carp from preferred spawning areas while allowing gamefish and other desired species access to those same spots.

The Sauk River connects Big Sauk Lake to water bodies from Lake Osakis upstream to the Horseshoe Chain and beyond downstream. "So, what we and the BSLA are doing is very much a watershed project," concluded Havranek. "Because as you remove pollutants—phosphorus in the form of carp—you start improving the ecological integrity within the connected wetlands and lakes. It's a cascade effect."

"Sauk Lake is a main stem lake in the Sauk River Watershed," added Deja Anton, Manager of the Todd County Soil and Water District (SWCD), "and because the imbalance of carp impacting water quality is many times over the threshold, Todd SWCD and the County AIS Committee support this as a top resource concern in its Aquatic Invasive Programming. The project has been partially funded annually by Todd County AIS funding for nearly four years, receiving almost \$10,000 through 2022."



Netted carp are removed, sorted, then transported alive to consumer markets.

Going forward, Havranek hopes to get the PIT stations grant wrapped this summer, and "we'll also be identifying potential partners who can provide assistance."

Help with funding, certainly, but he adds, assistance can also come in the form of letters of support, with education and outreach efforts and others.

"There are many ways individuals and organizations can become partners in this project."

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