

FISHERIES MANAGEMENT

Creating the Right Conditions for Spawning

MDC and U.S. Army Corps of Engineers partner to help endangered lake sturgeon

by Dianne Van Dien

✳ In April 2015, lake sturgeon recovery in Missouri reached a milestone: the first confirmation of spawning in the state. Overharvest and habitat changes had caused lake sturgeon numbers to plummet by the early 20th century. To help bolster the population, MDC began stocking fingerlings in 1984.

Because female lake sturgeon don't lay eggs until they are 20–30 years old, “the spawning activity we are seeing now is happening because fish that were stocked in the '80s are now becoming sexually mature,” explains Fisheries Biologist Annie Hentschke.

When it's time to release and fertilize eggs, lake sturgeon gather, but they won't do this just anywhere. “To spawn,” Fisheries Biologist Travis Moore says, “they need to have fast water. They need to have a rocky substrate.”

The spawning area found in 2015 is on the Mississippi River north of St. Louis. “There are boulders



Lake sturgeon can grow up to 8 feet, weigh up to 300 pounds, and live up to 150 years. Due to population declines from habitat changes and overharvest, the species was listed as state endangered in 1974.

and cobble all along that bank,” Fisheries Biologist Sarah Peper points out. The bank is below the Melvin Price Lock and Dam, which has a series of gates that can be opened and closed to regulate water flow and is operated by the U.S. Army Corps of Engineers.

“It appears in 2015 that they just happened to have the right gates open, making it the right kind of water flow over the right kind of habitat,” Peper says.

Five years went by with no further spawning. In 2020, MDC and the Corps began partnering to reproduce the conditions of 2015. Through a grant, the Corps funded telemetry to track fish movements and a hydraulic model to study how to tweak the dam's water flow to favor sturgeon spawning. In 2022 they tested their protocol.

“The fish spawned the first year we tried it,” reports Peper. “We've done it three years and they've spawned all three years.”

The Corps is now evaluating more dams on the Mississippi to see which have appropriate habitat and to figure out the right flow protocol for those areas.

Creating and protecting spawning habitat is just the first step. Scientists will next investigate how well the young lake sturgeon survive after hatching.

At a Glance

Spawning Statistics

Lake sturgeon spawning frequency:

- Females every 3-5 years
- Males every 1-3 years

Number of eggs per female: up to 500,000 per spawning interval

- Eggs can comprise 15-40% of a female's body weight.
- Eggs stick to rocks in the spawning area and hatch in 7-10 days.



HOW YOU CAN HELP:

Report possible lake sturgeon spawning activity to your regional MDC office.

- Spawning can occur late March through May. Look for large fish thrashing around in rocky waters.
- Potential locations include the Mississippi and Missouri rivers and their tributaries.