

# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

## 2026 Lake Sturgeon Population Assessment

Winnebago System  
WBIC 131100



Photo Credit: Wisconsin DNR



Margaret Stadig  
Winnebago Lake Sturgeon Biologist  
625 E. County Rd Y  
Oshkosh, WI  
Phone 920-410-8670  
[Email: margaret.stadig@wisconsin.gov](mailto:margaret.stadig@wisconsin.gov)  
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# Introduction

The Wisconsin Department of Natural Resources (DNR) has closely monitored the Winnebago System lake sturgeon population through annual spawning surveys since 1975. To estimate the population of lake sturgeon in the Winnebago System, the biologists need information from both the spring spawning tagging effort as well as the information during the spearing season. This consistent monitoring has allowed the lake sturgeon population to increase and thrive over the decades.

During the spawning season, the primary objectives include marking fish for estimates of abundance and exploitation (harvest rates), monitor size structure, evaluate growth and mortality, evaluate movement, and determine river and spawning site fidelity of adult lake sturgeon.

## SURVEY EFFORT

During the spring spawning run, the Upper Fox, Wolf River and all tributaries were sampled for adult spawning lake sturgeon using dip nets and electrofishing to handle as many fish as possible. Captured fish are measured for total length (inches). Sex (male/female) and spawning stage (green/ripe/spent) are determined. Fish are inspected for internal (PIT) and external (MONEL) tags. New PIT tags are inserted into any unmarked fish.

# Results

## 2026 LAKE STURGEON SPAWNING SUMMARY

There was record flooding throughout the Wolf River System in mid-April of 2026. Starting on April 15<sup>th</sup>, the river gauge in New London hit moderate flood stage (>10 ft) and major flood stage (>11 ft) on April 16<sup>th</sup> (Figure 1). For 6 days, the Wolf River was at major flood stage. On April 14<sup>th</sup>, a mere day before flooding occurred, WDNR staff saw pre-spawning activity at Bamboo Bend.

At many of the normal sturgeon spawning locations, dangerous flood levels remained for multiple days on the Wolf River. The flooding also caused road closures and devastating damage to surrounding properties. The DNR made the decision to keep staff safe and allow towns' property owners to handle the devastation. Due to this, sturgeon were not handled or tagged at many of the annual spawning sites on the Wolf River System. Flood waters also made it difficult to even observe any spawning activity. Instead the DNR focused more effort on the Fox River, exploring new areas and spending extra days tagging in Princeton.

Once the water levels receded, a few lake sturgeon were handled at the Shawano dam including collecting gametes for national rehabilitation projects. During the spawning season 296 lake sturgeon were handled. This is significantly lower than normal due to the record flooding. Of these, only 141 lake sturgeon

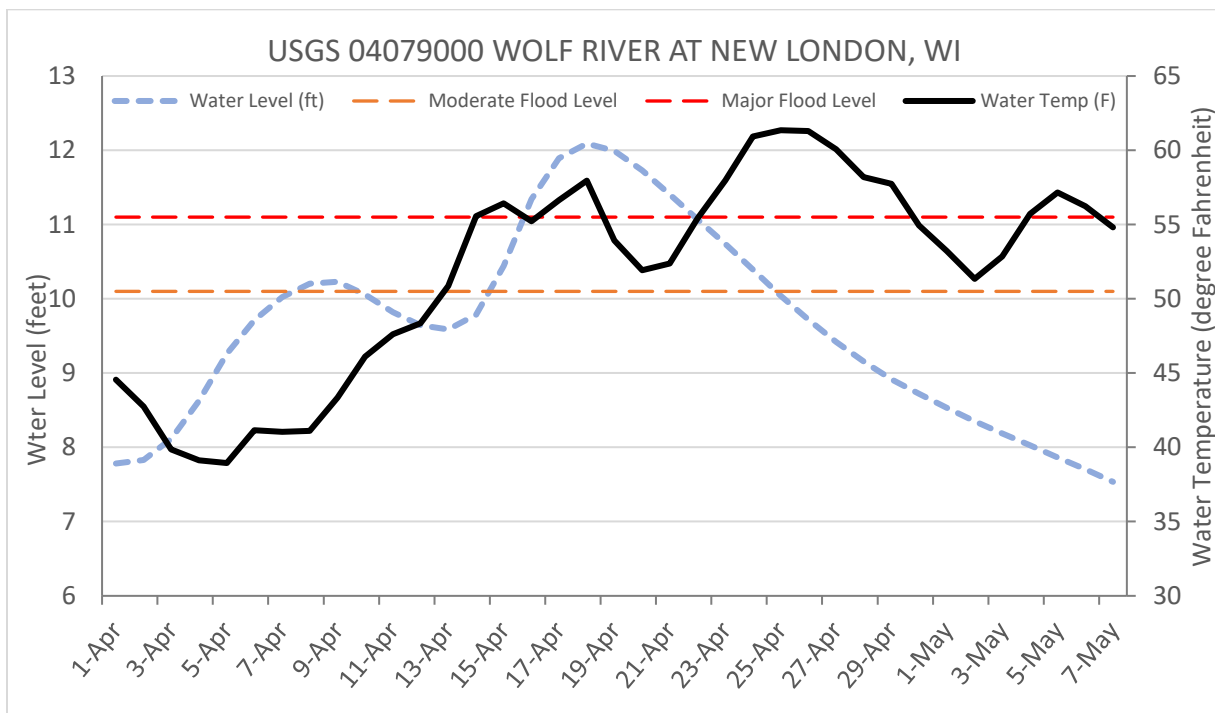
(48.6%) received a new tag (23 females, 115 males, and 3 unknowns). The length range for male lake sturgeon handled was 46.2 inches to 70.1 inches and 51.2 inches to 77.2 inches for females. These length ranges are similar to previous years.

There was significant concern about lake sturgeon recruitment (spawning success) this year due to lack of observed spawning from the floods. But observing spawning isn't the only way to confirm natural recruitment in the system. Larval drift nets were deployed in mid to late May over multiple nights to assess natural recruitment at Bamboo Bend in Shiocton. Drifting lake sturgeon larvae were captured during all nights sampled at Bamboo Bend. If lake sturgeon were able to successfully spawn in the Shiocton area, we can infer that lake sturgeon likely successfully spawned elsewhere within the system despite spawning not being observed. The sturgeon team will continue to assess recruitment through the annual young of year lake sturgeon sampling in early fall.

Table 1. Spawning sites and dates sampled within the Winnebago System in 2026.

|                    | Dates Sampled | Male | Female | Total |
|--------------------|---------------|------|--------|-------|
| <b>Princeton</b>   | 4/12 – 4/15   | 72   | 5      | 80    |
| <b>Shawano Dam</b> | 4/20 – 4/26   | 183  | 32     | 216   |

Figure 1. Water level (ft; blue dashed line; primary axis) and water temperature (Fahrenheit; solid black line; secondary axis) taken from the USGS monitoring station on the Wolf River near New London, Wisconsin, during the spring of 2026. The moderate (orange) and major (red) flood stages are indicated with horizontal dashed lines. Vertical grey lines indicate when spawning was observed at the Shawano Dam.



## 2026 LAKE STURGEON POPULATION ESTIMATE

The adult male lake sturgeon population in the Winnebago System is still consistently around 25,000 individuals (Figure 2). The adult female population estimate continues to fluctuate between 12,000 and 18,000 individuals. The estimate fluctuated up to 16,480 individuals in 2026 (Figure 3). This increases the 5-year average to 14,944 fish.

The drastic fluctuation in the population estimates for the last 5-7 years are likely artificial due to variations in sampling efficiencies brought on by weather (lower or higher harvest years based on ice conditions, longer or shorter spawning periods with more or less tags, etc.). Despite all the variations, all other indications are that the lake sturgeon population continues to be healthy. This highlights the resiliency of the Winnebago System. The hard work completed by the DNR and our conservation partners has created a system that has allowed for sturgeon to thrive through the unpredictable Wisconsin weather.

And this year truly embodies this resiliency. It is likely that the strong floods prevented lake sturgeon from using some of the spawning sites, but that is where the Winnebago System shines. The variety of spawning sites throughout the system means that no matter the water levels and weather conditions in the spring, there will always be a few spawning sites accessible during those river conditions. Some sites might be better during low water while others during high water years.

The DNR is evaluating how to handle the 2026 tagging anomaly for the 2027 population estimate. The significant decrease in tagging will likely cause an artificial swing in the population estimate. We continue to evaluate methods to handle this likely outlier in next year's population estimate.

Over the past 3+ decades, the DNR has tagged a significant number of fish within the Winnebago System. Couple this with the advances in population sciences, there are likely new options available for estimating the Winnebago lake sturgeon population. This system is lucky with the vast amount of information available. It is a good time to assess if any new techniques are available to confirm the current estimate techniques.

Table 2. Survey information for the Winnebago System.

|                                           | <b>Male</b>                  | <b>Female</b>               |
|-------------------------------------------|------------------------------|-----------------------------|
| <b>New Fish Marked in spring 2025</b>     | 694                          | 179                         |
| <b>2026 Spearing Season Total Harvest</b> | 668                          | 671                         |
| <b>2026 Spearing Season Recaptures</b>    | 166                          | 59                          |
| <b>Population Estimate (95% CI)</b>       | 25,089<br>(22,038 – 28,8210) | 16,480<br>(13,407 – 22,221) |
| <b>5-year Average Population Estimate</b> | 24,437                       | 14,944                      |

Figure 2. The population estimate (black dots) of the adult male lake sturgeon (top graph) and adult female lake sturgeon (bottom graph) within the Winnebago System. The solid lines indicates the 5-year average of the population estimate.

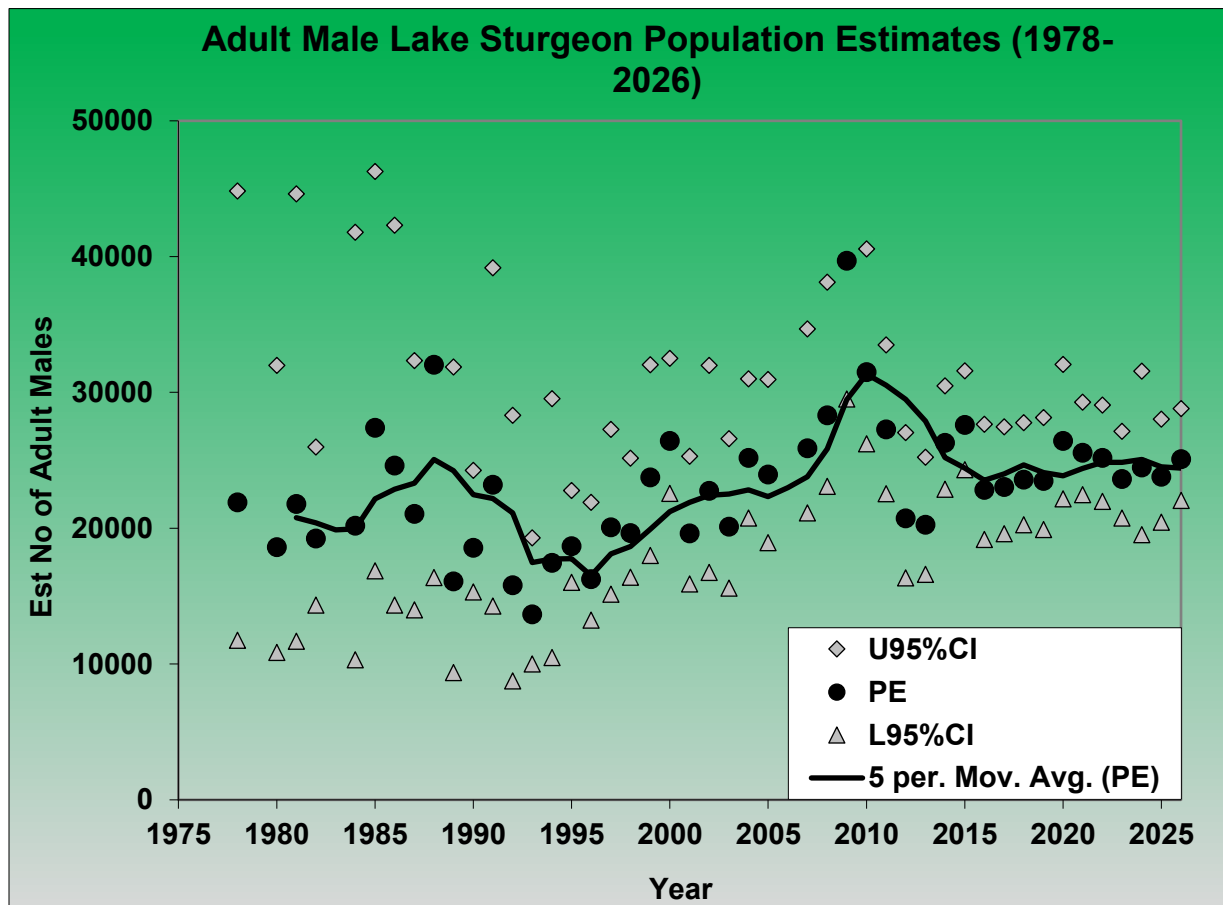


Figure 3. The population estimate (black dots) of the adult female lake sturgeon within the Winnebago System. The solid lines indicates the 5-year average of the population estimate.

