



# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

## 2024 Lake Sturgeon Spearing Season Winnebago System

### Introduction And Objectives

According to the Wisconsin State Climatology Office, the 2024 winter was the warmest in state record since record-keeping began in 1895. The warm conditions made for an interesting spearing season with many days throughout the season being around the mid-40 degrees or warmer. While many spearer stayed home waiting for better years, the spearkers that did cautiously take to the ice jettisoned normal ice shanties, large ice saws, and vehicles for lighter pop-up tents, hand saws, and otter sleds. Ice conditions prohibited water clarity checks which normally occur prior to the season opening.

The harvest caps for the 2024 spearing season were determined using the 2023 abundance estimates for the Winnebago System lake sturgeon population (about 24,000 males and 16,099 adult females). The 2024 system-wide harvest caps were 350 juvenile females (<55"), 805 adult females (>55"), and 1,242 males. The Upriver Lakes fishery was allocated 10% (80 fish) of the adult female harvest cap and 20% of the juvenile females (70 fish) and males (248 fish) harvest caps.

Despite ice conditions, the DNR was able to gather crucial information about the Winnebago System lake sturgeon population from the spearkers who were able to access the ice and lucky enough to spear a fish.

### DNR Contact

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### Lake Information

Winnebago: 131,939 acres  
Butte des Morts: 8,581 acres  
Poygan: 14,024 acres  
Winneconne: 4,553 acres

### Regulations

Daily Bag and Size Limit:  
Harvest only occurs during the February spearing season  
One lake sturgeon per season  
36-inch minimum length

### Survey Method

- During the lake sturgeon spearing season, all lake sturgeon harvested are registered at a DNR designated registration station.
- During registration, lake sturgeon are weighed (lbs) and measured (inches to the nearest tenth). Sex and stage of maturity is also recorded. Any external or internal tags are recorded.

### Metric Descriptions

- **Length frequency distribution (LFD) is a graphical representation of the number or percentage of fish captured by half-inch or one-inch size intervals.** Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or sampling gear limitations.

### LAKE STURGEON HARVEST FOR LAKE WINNEBAGO AND UPRIVER LAKES

System	Site Location	Juv. Female	Adult Female	Male	Total
Lake Winnebago	Area 1	3	4	11	18
	Area 2	0	10	7	17
	Area 3	7	24	22	53
	Area 4	0	0	1	1
	Area 5	31	51	93	175
	Area 6	4	14	19	37
	<b>Total*</b>		45	103	154
Upriver Lakes	L. Butte des Morts	2	6	7	15
	L. Poygan	23	26	63	112
	L. Winneconne	1	1	1	3
	<b>Total</b>	26	33	71	130
<b>System Total*</b>		136	71	225	432

### NUMBER OF LAKE STURGEON REGISTERED AT DNR STATION IN 2024

Registration Location	Juv. Fem	Adult Fem	Male	Total
North Winnebago	0	9	9	18
Stockbridge*	0	1	0	1
Quinney*	0	0	0	0
Pipe	4	10	17	31
Southwest Winnebago	36	69	112	217
Downtown Oshkosh	3	13	12	28
Neenah*	2	1	4	7
Winneconne	10	14	25	49
Indian Point	15	18	43	76
Poygan*	1	1	3	5

\* Stockbridge and Quinney were closed after the first weekend. Poygan and Neenah were open the first and second weekends but closed during the week and on the final weekend.



Spearkers walking out onto Lake Poygan opening weekend of the 2024 lake sturgeon spearing season. Photo credit: Jill Pernaski



2024 Lake Sturgeon Spearing Season  
Winnebago System

2024 Season Summary

- A total of 302 lake sturgeon were harvested on Lake Winnebago during the 2024 season. The poor ice conditions limited the number of spearers who took to the ice, thus the low harvest this year. The Lake Winnebago season lasted the full 16-days, with 302 lake sturgeon harvested. This was the 9th consecutive full-length season on Lake Winnebago.
- The Upriver Lakes season lasted the full 16-days, with 130 lake sturgeon harvested. The 2020 season was the last time the Upriver Lakes season that went the full 16-days.
- The 432 lake sturgeon speared in 2024 is significantly less than the average lake sturgeon harvested over the last two decades (where the average harvest is 1,207 lake sturgeon). While this year's harvest was down, it is not the lowest harvest since 2000. Only 225 lake sturgeon were harvested in 2006 from Lake Winnebago. This is the lowest harvest when spearing occurred on both Lake Winnebago and the Upriver Lakes.
- There have been fairly low harvests years in 2012 and 2013 (566 and 567 lake sturgeon, respectively). Warm weather and bad ice conditions only seemed to affect the 2012 harvest. Water clarity seemed to be a more important factor restricting harvest in both of these years compared to the 2024.
- While the amount of harvest has varied throughout the last few years, the proportion of fish previously tagged has been consistent. During 2024, 19.7% (85 lake sturgeon) of the fish speared were fish previously PIT tagged compared to 20.3% in 2023 and 20.4% in 2022.

LAKE WINNEBAGO COUNTS

	2024	2023	2022
Shanty Counts	468	3,148	5,986
License Sales	13,060	13,246	12,694
Upriver Applicants	9,106	9,474	8,655

Lake Winnebago Summary

- 302 lake sturgeon were harvested on Lake Winnebago. Since mandatory registration in 1955 (70 seasons), the 2024 harvest ranks 58th in amount of fish harvested.
- 217 lake sturgeon were registered at the Southwest Winnebago registration station. This was 50% of the fish harvested throughout the entire system. It was likely ice conditions were more stable and better on the southwest portion of the Lake Winnebago compared to other locations.
- The Lake Winnebago season lasted the full 16-days. This was the 9th consecutive full-length season on Lake Winnebago. Since 2000 (25 seasons), there have been 15 spearing seasons that have lasted the full 16-days.
- Average weights of lake sturgeon system-wide were 22.8 lbs for juvenile female, 57.1 lbs for adult females and 32.5 lbs for males. Weights for adult females and males were slightly less than those speared in the 2023 season system wide (62.1 lbs and 37.5 lbs, respectively). Average weights are generally in relation to average length. While the average weights were less than previous years, the length/weight relationship for lake sturgeon during the 2024 does generally follow the length/weight trend for Lake Winnebago though on the lower end of the relationship (Figure 2).
- There have been concerns from spearers about lake sturgeon weights during the spearing season. Lake sturgeon are extremely resilient species. And while weights were lower than they have been in the last few spearing seasons, the DNR has not had reports of lake sturgeon dying. About 2% of the lake sturgeon speared on Lake Winnebago were over 100 lbs, still up from previous decades (Figure 3).

Right: Parker Popp was able to get out on Lake Winnebago opening weekend to successfully harvest his first lake sturgeon, a 47.7 inch, 21.2 lbs. male. Congrats Parker!



Photo credit: WDNR

Winnebago System Length Frequency

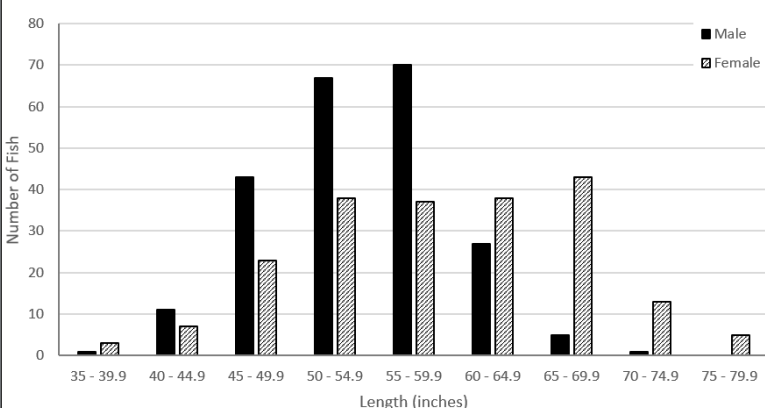


Figure 1. Length frequency histogram of lake sturgeon harvested on the Lake Winnebago System during the 2024 spearing season

Length/Weight Relationship in Lake Winnebago

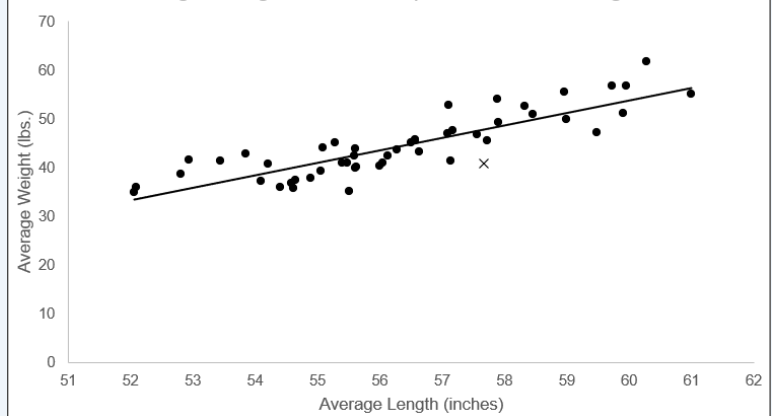


Figure 2. Average length verse average weight for each of the last 50 seasons. The "x" indicates the length/weight relationship for the 2024 season.



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**Upriver Lakes Summary**

- Ice conditions were questionable on the Upriver Lakes throughout most of the season. This year most of the spearkers were forced to stay close to shore only venturing about 200 yards out from the shoreline. The Upriver Lakes season lasted the full 16-day season. Since 2007, when the lottery system was enacted, only three seasons have lasted the full 16-days (2017, 2020 and 2024).
- 130 lake sturgeon were speared on the Upriver Lakes. This is the lowest harvest on the Upriver Lakes since the lottery system was set in place in 2007. Similarly, the success rate of spearkers on the Upriver Lakes was the lowest it has been at 26.5%. There were likely many spearkers who did not take to the ice or were very selective of the days they did venture out as opposed to spearing the whole season.
- The average length and weight of lake sturgeon speared on the Upriver was 53.4 inches and 32.9 lbs.
- Three of the nine fish weighing over 100 pounds harvested this year came from the Upriver Lakes. The top two heaviest lake sturgeon came from Lake Poygan. Both were F4 females. The heaviest measured 77.6 inches, 148.0 pounds speared by Kurt Knoll. The other measured 75.1 inches, 125.7 pounds and was speared by Kevin Pawlacyk.
- Over 9,000 people continue to apply for an Upriver tag. This year, spearkers on average needed a minimum of eight preference points to be selected for an Upriver tag.

# of Preference Points	# of Applicants for Lottery*	# of Winners	# Purchased Preference Points Only
13	0	0	1
12	0	0	4
11	11	9	15
10	47	41	54
9	306	282	104
8	524	168	232
7	390	0	414
6	331	0	610
5	250	0	713
4	253	0	715
3	216	0	911
2	260	0	1110
1	320	0	1315
<b>Total</b>	<b>2,908</b>	<b>500</b>	<b>6,198</b>

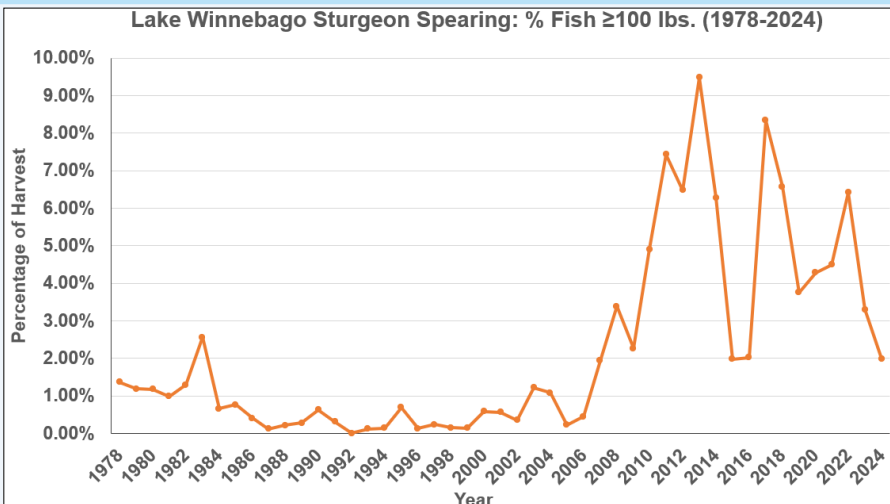


Figure 3. The percent of lake sturgeon harvested over 100 pounds from 1978-2024.

\*Applicants with more than eight preference points that were not selected are applying as a group with at least one member in the group holding less than eight preference points and thus not chosen.

2024 SIZE STRUCTURE METRICS					
System	Sex	Ave. Weight	Weight Range	Ave. Length	Length Range
Lake Winnebago	Juv. Fem	24.4	11.2—33.3	50.2	39.0—54.9
	Adult Fem	58.4	24.7—113.6	64.7	55.0—77.0
	Male	34.4	3.1—79.6	55.3	41.2—69.3
Upriver Lakes	Juv. Fem	20.2	10.5—35.9	47.8	38.7—53.5
	Adult Fem	52.8	31.3—148.0	61.6	55.2—77.6
	Male	28.2	11.3—78.8	51.7	39.1—70.4
System Wide	Juv. Fem	22.8	10.5—35.9	49.3	38.7—54.9
	Adult Fem	57.1	24.7—148.0	64.0	55.0—77.6
	Male	32.5	11.3—79.6	54.2	39.1—70.4



Jake Rogler (left) and Tyler Miller (right) celebrating a well earned sturgeon on the south side of Lake Winnebago despite ice conditions and poor water clarity. Photo credit: Jake Rogler and Tyler Miller.