

Wisconsin Department of Natural Resources

2025 Stream Survey Report

First South Branch Oconto River – Oconto County
WBIC: 484700

Introduction and Objectives

The First South Branch Oconto River is 21.7 miles long and average width is 26 feet before combining with the South Branch Oconto River in Menominee County. Approximately 10 miles are Class 1 (STH 32 downstream to the confluence of the South Branch Oconto River, and a small segment in the uppermost reach above Valley Lake), 2 miles are Class 2 (Tar Dam Road downstream to STH 32), and the majority of the upper reach is unclassified, draining from several lakes that provide warm water influences. There are several road crossings providing stream access to the public in Oconto County. However, there are large segments of the stream that are located within the National Forest that are not located near any road crossings. These areas would require walking or wading to access the secluded areas of the stream. The survey location is primarily forested within the Chequamegon Nicolet National Forest, downstream of CTH W.

The First South Branch Oconto River is a trend site that is typically surveyed on a 2-year rotation since 2007. Before the implementation of a 2-year rotation, this river was surveyed annually since the 1990s. During these earlier surveys, habitat improvement projects were organized and installed with funding by Trout Stamp dollars and Green Bay, Oconto, and Marinette Trout Unlimited chapters. In the 1980s, bank covers were installed downstream from CTH W. Further installments of brush bundles, digger logs, and boulders were added in the 1990s downstream from STH 64.



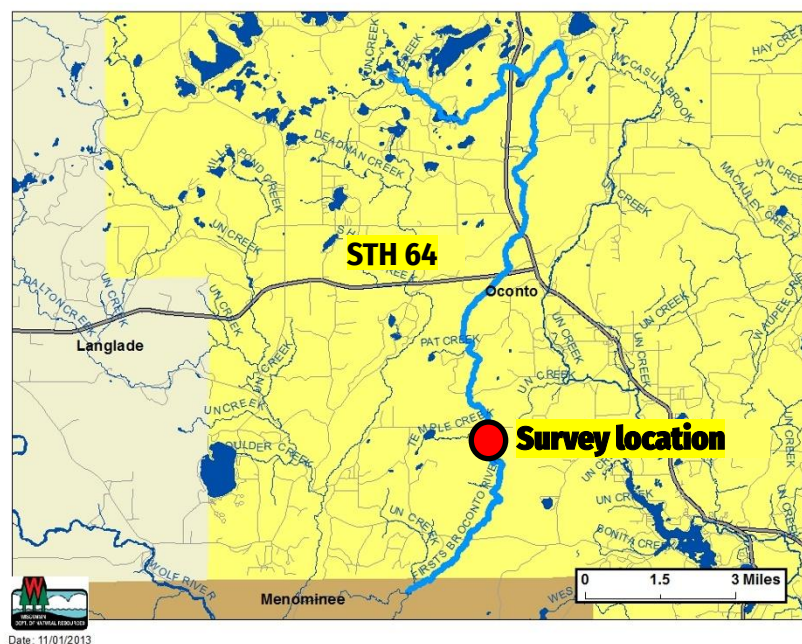
Picture 1. Barge crew collecting trout with stream shocker. Photo credit: T. Paoli

The most recent habitat project in 2016 was to improve the fishability downstream of CTH W and add more brush bundles. Some of the bank covers within the trend station have collapsed due to age. In 2026 and 2027, DNR and U.S. Forest Service are addressing the failing bank covers and improving the Forest Service access that runs parallel to the trend site.

Brook trout are the dominant salmonid in the First South Branch Oconto River. However, brown trout are present in low numbers. From the 1970s until 2018, brook trout yearlings were annually stocked in the Class 2 reach, at Tar Dam Road. Brook trout fall fingerlings were stocked annually from 2012 to 2017. In 1972 and 1996, yearling rainbow trout were stocked and brown trout yearlings were stocked in 1988. Currently, no future stocking of trout is planned as naturally reproducing brook trout populations are present in the system.

Prior to 2016, the regulation for the Class 1 portion of this stream (downstream from STH 32) was an 8 inch minimum for brook trout and 12 inch minimum for brown and rainbow trout, with a combined daily bag of 3 in total. From 2016 through 2025, the entire First South Branch Oconto River was under a yellow category for all trout (8 inch minimum; 3 daily bag). As part of a statewide regulation overhaul for inland trout streams, regulations were adjusted to a green category in 2026, with the season open from the first Saturday in April to October 15 with a 5 daily bag limit and no size minimum (Table 1).

The objective of the 2025 trend survey on the First South Branch Oconto River is to monitor relative abundance and size structure of trout.



Picture 2. Map of First South Branch Oconto River site.

Regulations

Table 1. Trout fishing regulations on the First South Branch Oconto River

	Before April 1, 2026	After April 1, 2026
Season dates	First Saturday in May to October 15	First Saturday in April to October 15
Category	Yellow	Green
Daily bag	3 trout	5 trout
Size minimum	8 inches	none

Metric Descriptions

- **Catch per unit effort (CPUE)** is a method of quantifying fish population relative abundance. For all trout surveys, we typically quantify CPUE as the number of a given size class of trout captured per mile of stream. CPUE indexes are compared to other trout streams throughout Wisconsin by what percentile (PCTL) they fall out in. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state. CPUE percentiles can also be used to categorize trout abundance as low density (<33rd percentile), moderate density (33rd - 66th percentile), high density (66th - 90th percentile) and very high density (>90th percentile).
- **Length frequency distribution** is a graphical representation of the number or percentage of fish captured by half inch or one inch size intervals.

Survey Method

- All streams are sampled according to DNR wadable streams monitoring protocols.
- Metrics used to describe trout populations include average length, CPUE and length frequency distribution.

Table 2. Survey information

Station	First South Branch Oconto River at CTH W
Survey Date	July 29, 2025
Station Length	3220 feet (0.61 miles)
Temperature (°F)	68°F
Mean Stream Width	26 feet
GPS (Start/Finish)	N45.15426, W-88.52434 / N45.15923, W-88.52602
Gear	Towed Barge Streamshocker
Dippers	3

Species

During the 2025 trout stream survey, all brook trout and brown trout were collected. Information for each species collected can be found below.

Brook trout

The 2025 survey indicated brook trout density for all sizes (247 per mile) was below the long-term average of 455 per mile (Figure 1). A total of 151 brook trout were sampled, ranging from 2.1 to 11.2 inches. Average length was 5.8 inches (Table 3). Percentiles were calculated for the CPUE for the First South Branch Oconto River (Table 4). These were compared to other Class 1 trout streams in the Northern Lakes and Forests ecoregion in Wisconsin. Brook trout ≥ 8 " (legal size for harvest) increased to 34 per mile compared to 11 per mile in the last survey completed in 2023.

Table 3. Catch metrics for brook trout in First South Branch Oconto River.

Station	First South Branch Oconto River at CTH W
Total Number Sampled	151
Average Length (inches)	5.8
Length Range (inches)	2.1 – 11.2



Picture 3. An 11.2-inch Brook Trout collected during 2025 survey. Photo Credit: T. Paoli

Figure 1. Brook trout CPUE of First South Branch Oconto River at CTH W since 1987-2025.

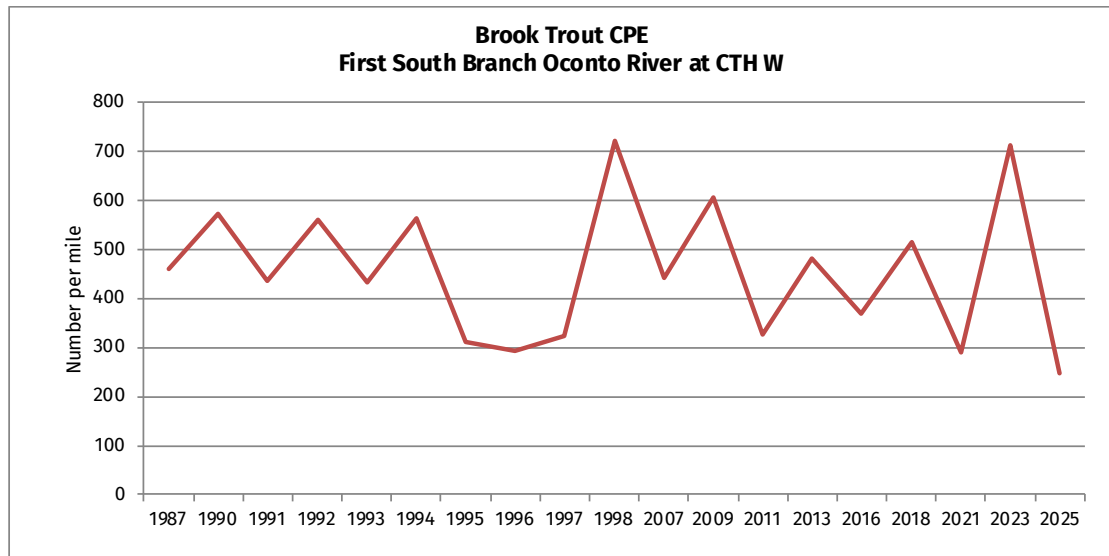
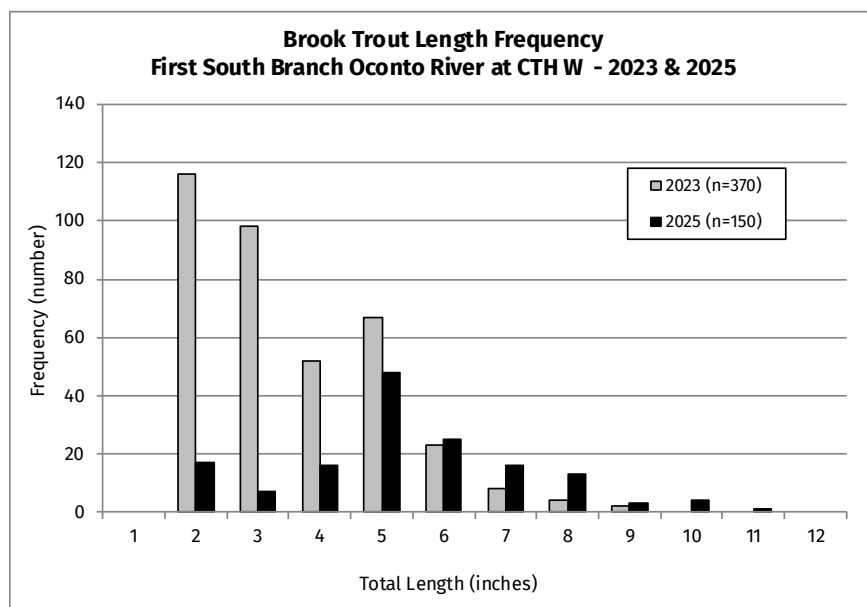


Table 4. Catch per unit of effort (CPUE) of brook trout in First South Branch Oconto River, 2025.

Length	CPUE (number per mile)	Percentile	Ranking
Total CPUE (all sizes)	247.5	45 - 50%	Moderate Density
Young of Year ($\leq 4''$)	65.6	40 - 45%	Moderate Density
$\geq 5''$	180.3	50 - 55%	Moderate Density
$\geq 8''$	34.4	70 - 75%	High Density
$\geq 10''$	8.1	80 - 85%	High Density

Figure 2. Brook trout length frequency of First South Branch Oconto River, 2023 & 2025 surveys.



Brown trout

A total of 9 brown trout ranging from 6.5 to 17.1 inches were sampled. The average length was 9.4 inches. Compared to 2023, brown trout catches doubled in 2025. However, natural reproduction rates still appear to be relatively low for brown trout in this stream.



Picture 4. A 17.1-inch Brown Trout collected during 2025 survey. Photo Credit: T. Paoli

Summary

While the total number of brook trout caught was significantly lower than the last trend survey conducted in 2023, the overall size structure representation was better than previously seen. The reduced number of fish caught during this trend survey can likely be associated with the water temperature being significantly higher (68°F) than

2023 (60°F). Fluctuations in trout catches have been documented throughout the time series (1987 to present) but long-term CPUE averages appear to be stable.

Recruitment and natural reproduction were evident in the brook trout population as seen in the length frequency sizes of fish collected in 2025. Overall, the brook trout fishery is in good condition with a total CPUE rated as a moderate density, with 8 inch and larger brook trout at a high density.

The next trend survey at CTH W is planned for 2027. Documenting changes in the trout population or size structure in future surveys will help to evaluate the new fishing regulations that went into effect in 2026 and ongoing habitat work. For any other information please reach out to the Peshtigo DNR Office.

This report was compiled by:

Jenna Brandl,
LTE Fisheries Biologist
101 N. Ogden Road,
Peshtigo, WI 54157
715-582-1226

jenna.brandl@wisconsin.gov

Tammie Paoli,
Senior Fisheries Biologist
101 N. Ogden Road,
Peshtigo, WI 54157
715-582-5052

tammie.paoli@wisconsin.gov

Ron Rhode,
Fisheries Technician
101 N. Ogden Road,
Peshtigo, WI 54157
715-582-5008

ronald.rhode@wisconsin.gov

