



WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2025

Brant Creek, Oneida County

WBIC: 1551500

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Introduction And Objectives

Brant Creek is a cool-warm headwater stream meandering 8.83 miles within the Somo River watershed in south western Oneida County and north western Lincoln County. The upper 5.5 miles of Brant Creek is classified as class 2 trout water with reproduction levels that may not use all food and space. The lower 3.33 miles of Brant Creek are classified as class 1 trout water having sufficient reproduction that use all resources. The Wisconsin Department of Natural Resources (DNR) survey sought to describe the trout population characteristics, assess the overall condition of the system and evaluate the appropriateness of the assigned trout classification.

DNR Contact

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Regulations

Category: Green
Daily Bag and Size Limit:
5 trout in total of any length

SURVEY INFORMATION

Station	GPS (Start/Finish)	Survey Date	Station Length (ft)	Mean Stream Width (ft)	Temperature (°F)	Gear	Dippers	Qualitative Habitat score	Habitat Status	IBI
14 M above Hwy 8	45.5552, -89.9621 45.5574, -89.9632	8/6/2025	470	10	62.2	stream shocker	3	58	Good	90



Figure 1. Field staff identifying and measuring fish collected during the Brant Creek survey.

Survey Method

- Stations were sampled according to DNR wadable streams monitoring protocol.
- Trout were counted and measured. Other species were counted allowing an Index of Biotic Integrity (IBI) score to be calculated.
- Metrics describing the trout population include average length, catch per unit effort (CPUE) and length frequency.
- Qualitative fish habitat rating for streams < 10 meters was used to index factors potentially influencing the fish community including riparian buffer, bank erosion, pool areas, width to depth, riffle areas and the amount of sediment.

Metric Descriptions

- Catch per unit effort (CPUE)** is a method of quantifying fish population relative abundance. For all trout surveys, CPUE is quantified 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.
- Index of Biotic Integrity (IBI)** is a rating of environmental quality based on the fish assemblage. Scores of 90 - 100 indicate excellent stream quality, while scores less than 30 indicate poor stream quality. Our analysis utilizes the IBI for Wisconsin coldwater streams. Coldwater streams in Wisconsin are those in which the maximum daily mean water temperature is usually <22°C (71.6°F). A coolwater stream IBI may also be used when a stream doesn't fit the temperature criteria for a coldwater stream.
- Fish Habitat rating** is a scoring of the relative quality and quantity of aquatic habitat available to support a healthy fish community. Scores of 75 - 100 indicate excellent fish habitat, while scores less than 20 indicate poor fish habitat. Our analysis utilizes the fish habitat rating for systems < 10 meters or > 10 meters depending on the mean stream width.



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SPECIES SIZE AND ABUNDANCE (CPUE) METRICS									
Species	Number Sampled	Average Length (Inches)	Length Range (Inches)	CPUE (No. per Mile)					
				Total CPUE	YOY CPUE	≥5" CPUE	≥8" CPUE	≥10" CPUE	≥12" CPUE
Brook trout	20	4.3	2.4–8.7	222.2	133.3	77.8	11.1	0.0	0.0

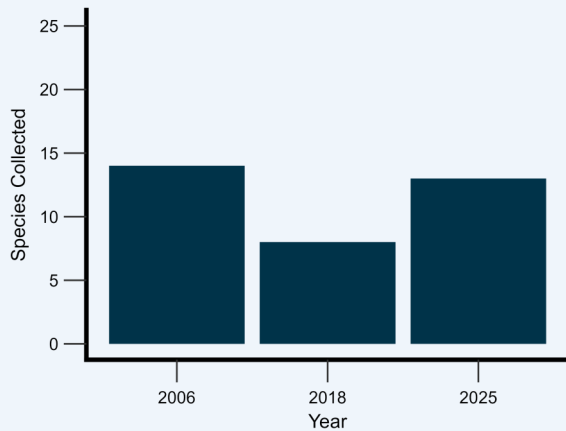


Figure 2. Number of species collected during each survey year at the hwy 8 station in Brant Creek.

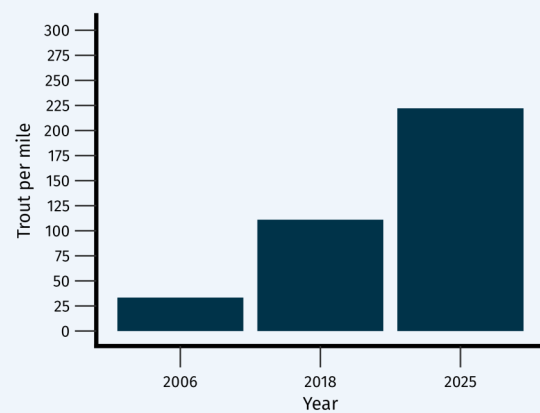


Figure 3. Catch per mile of brook trout at the hwy 8 station in Brant Creek.

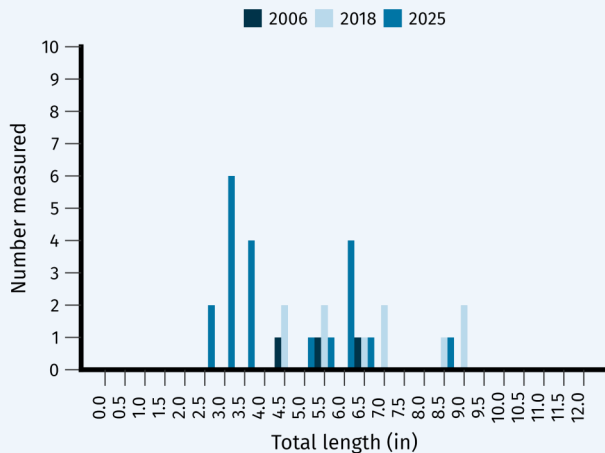


Figure 4. Brook trout size structure within Brant Creek across the various survey years.



Photo Credit: Wisconsin DNR

Figure 5. Small burbot captured during the Brant Creek survey.

Summary

- A fish community indicative of the cool-warm headwater classification with coldwater and coolwater species in excellent overall condition (IBI 90) was found during the 2025 survey.
- Creek chub was the most abundant fish species followed by western blacknose dace, brook trout and common shiner. Other species collected included brook stickleback, burbot, central mudminnow, finescale dace, hornyhead chub, longnose dace, log perch, mottled sculpin and white sucker.
- Brook trout catch rate has increased among survey years representing a moderate abundance in 2025 around the 35th percentile statewide potentially warranting reclassifying the entire system to Class 1 fishery (Figure 3).
- Brook trout average size was more than 3 inches smaller than the statewide average (7.5 inches) and 2 inches smaller than previous surveys (Figure 4) potentially indicating improved survival of age-0 trout and a role as spawning and nursery area.
- A couple bends, two riffles and a few pools were found within the well buffered survey reach where abundant woody habitat was present resulting in a qualitative habitat ranking of good (58) falling around the 50th percentile for Oneida county and statewide.