

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2022 STREAM SURVEY REPORT

HALLER CREEK

TROUT STREAM ROTATION (WBIC 411000)

BROWN COUNTY



INTRODUCTION AND OBJECTIVES

Haller Creek is a 6.28-mile stream, of which the upper 4.03 miles is considered Class II trout water. Haller Creek originates in Oconto County and flows southeast, where it is a tributary to the Saumico River. Public fishing access consists of many road crossings along with significant amounts of public land that is part of the Brown County Reforestation Camp. The objectives of the rotation surveys are to determine species composition, relative abundance and size structure for trout and other gamefish present.

Regulations Category: **Yellow** Size Limit: 8 inches Daily Bag Limit: 3 (in total)

WISCONSIN DNR CONTACT INFO.

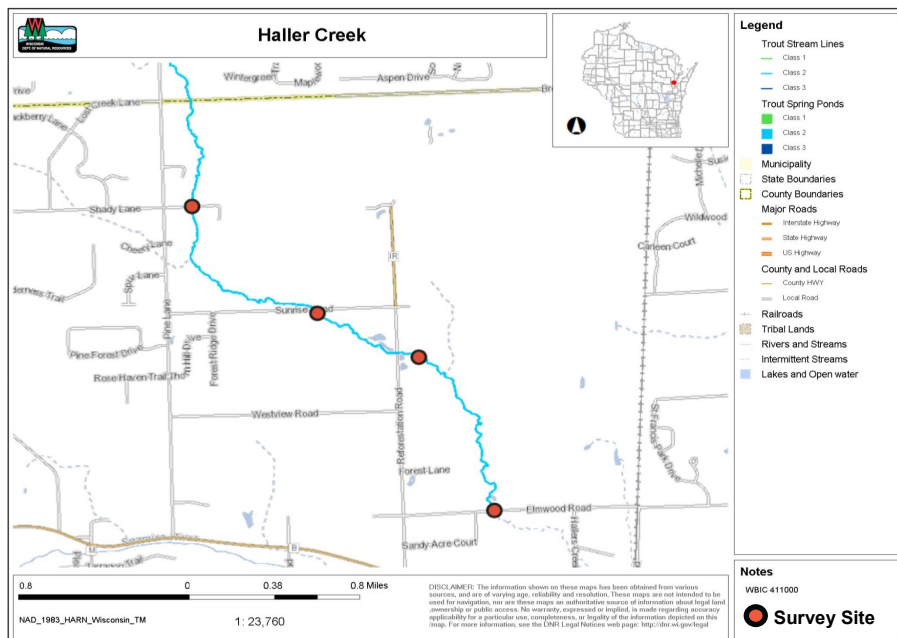
Mel Mohr - Limited Term Fisheries Technician
Jason Breeggemann - Fisheries Biologist
Steve Surendonk - Fisheries Technician
 Wisconsin Dept. of Natural Resources
 2984 Shawano Ave
 Green Bay, WI 54313

Phone: 920-662-5480

E-mail: Jason.Breeggemann@wisconsin.gov

SURVEY INFORMATION

Station	Survey Date	Station Length	Temperature (°F)	Mean Stream Width (ft)	GPS (Start/Finish)	Gear	Dippers	IBI
Shady Lane	8/1/2022	328 ft	66	5.16	44.669877, -88.1082500 44.670347, -88.1074967	Backpack Shocker	1	Yes
Sunrise Road	8/1/2022	328 ft	64	5.39	44.662335, -88.0971800 44.662437, -88.0977033	Backpack Shocker	1	Yes
East of Cty Hwy IR (NEW Zoo)	8/7/2022	328 ft	75	7.74	44.659242, -88.0883363 44.659428, -88.0891217	Backpack Shocker	1	Yes
Elmwood Road	8/22/2022	328 ft	65	9.94	44.648780, -88.0820417 44.649013, -88.0828083	Backpack Shocker	1	Yes



SURVEY METHOD

- All streams are sampled according to DNR Wadeable Streams Monitoring Protocols. Haller Creek is on a six year rotation schedule with four sites identified for the segment of stream in Brown County
- All sampling stations are electrofished with either a towed barge shocker or backpack shocker.
- Sampling distance is at least 35 times the mean stream width or a minimum of 330 feet (i.e., 100 meters).
- All trout and other gamefish are measured for length and examined for fin clips.
- In at least one stream segment (if multiple stations are being sampled), all fish species are collected and counted for the calculation of an Index of Biotic Integrity (IBI).
- Metrics used to describe trout populations include average length, catch per unit effort (CPUE), length frequency distribution and an IBI.

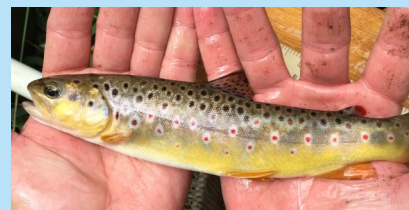


Figure 1. Brown trout captured in a DNR electrofishing survey. Photo credit Wisconsin DNR.

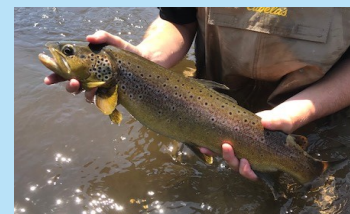


Figure 2. Brown trout captured in a DNR electrofishing survey. Photo credit Wisconsin DNR.

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 rank 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.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2022 STREAM SURVEY REPORT - CONTINUED

HALLER CREEK

TROUT STREAM ROTATION (WBIC 411000)



SIZE AND ABUNDANCE (CPUE) METRICS

Station	Species	Total Number Sampled	Average Length (inches)	Length Range (inches)	CPUE (No. per Mile) Statewide Percentile in Parentheses					
					Total CPUE (PCTL)	YOY CPUE	≥5" CPUE (PCTL)	≥8" CPUE (PCTL)	≥10" CPUE (PCTL)	≥12" CPUE (PCTL)
Sunrise Road	Brown trout	1	9.1	9.1	16.09 (16th)	-	16.09 (20th)	16.09 (33rd)	-	-

Brown Trout Length Frequency Distribution

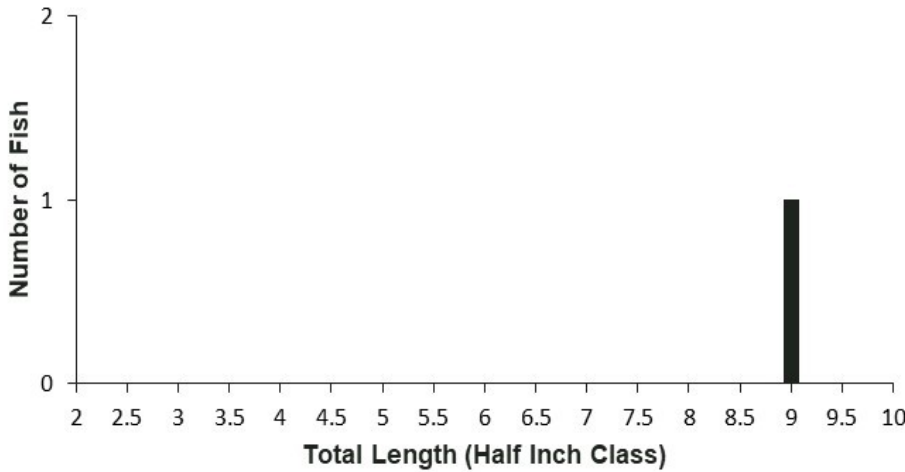


Figure 3. Net of Brown trout captured in a DNR electrofishing survey. Photo credit Wisconsin DNR.

Species Community and IBI for Sunrise Rd

Species Sampled	Total	IBI Score	Integrity Rating
Common shiner	9	Coldwater: 10	Coldwater: Poor
Creek chub	10		
White sucker	11		
Central mudminnow	4		
Green sunfish	8		
American brook lamprey ammocoete	2		
Johnny darter	7		
Brown trout	1		

Species Community and IBI for Elmwood Rd

Species Sampled	Total	IBI Score	Integrity Rating
Blackside darter	1	Coldwater: 0	Coldwater: Very Poor
Central mudminnow	15		
Creek chub	12		
Green sunfish	2		
Johnny darter	6		
Largemouth bass	1		

SUMMARY

- Only one brown trout was captured between all four survey sites, meaning brown trout densities were very low at all stations, with total brown trout CPUE ranking out in the 16th percentile at the Sunrise Road station where the lone brown trout was captured.
- A total of 244 fish from 15 different species were captured across all four survey locations. Creek chub, common shiner, central mudminnow and Johnny darter were the most common species encountered in Haller Creek. Haller Creek was last surveyed in 2016. No trout were captured in the 2016 survey, and the fish community in that year was very similar to what was observed in 2022.
- No young of the year (YOY) trout were captured. The one brown trout that was captured was likely one of the yearling brown trout that was stocked into Haller Creek before the fishing opener. Approximately 375 yearling brown trout get stocked into Haller Creek each spring.
- The IBI scores suggest this stream is a poor to very poor coldwater stream. Although only two IBI scores were presented, the fish community and IBI scores at the other two sampling locations were very similar to the two presented. Despite the Wisconsin Streams Natural Community Model considering Haller Creek a cool - cold headwater stream, summer water temperatures in the lower sections likely get too warm for trout, as seen by water temperatures of 75°F at the CTY HWY IR station.
- Given the reliance on stocking to maintain a trout population in Haller Creek, a reclassification to a Class III trout stream should be considered.