



2021 Stream Survey Report

WILLOW CREEK TREND SITE

(WBIC 243700)

Waushara County

INTRODUCTION AND OBJECTIVES

Willow Creek is a Class I or II trout water stream and consists of 28.20 miles of trout water. The Willow Creek stretches through Waushara County and is part of the Pine and Willow Rivers watershed. This trend site had some habitat work done in 2012 after heavy winds blew down numerous large trees in 2011. Objectives of the trend survey are to monitor relative abundance and size structure.

Regulations: **Yellow**

Size Limit: All Trout - 8 inches

Daily Bag Limit: 3 (in total)

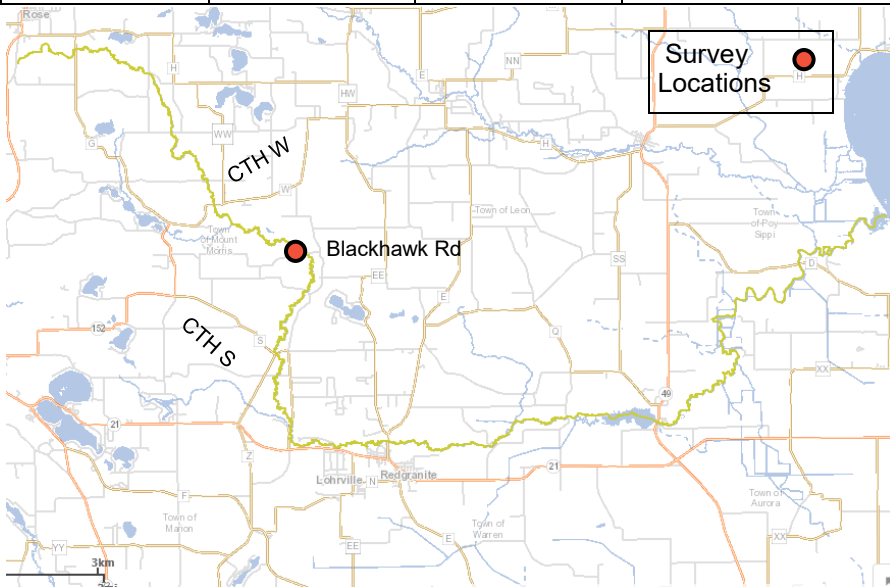
WISCONSIN DNR CONTACT INFO.

Scott Bunde - Fisheries Biologist Senior
Wisconsin Dept. of Natural Resources
427 E. Tower Drive, Suite 100
Wautoma, WI 54982

Phone: 920 - 787-5683
 E-mail: scott.bunde@wisconsin.gov

SURVEY INFORMATION

Site location	Survey Date	Station Length	Water Temperature (F)	GPS (Start/Finish)	Gear	Dippers
Blackhawk Rd	08/03/2021	2000 ft	60	44.1029,-89.1323 44.1051,-89.1364	Towed Barge Shocker	3



Survey Method

- The Willow Creek trend site has been surveyed annually since 2005 with the exception of 2011 (storm damage). This particular site is 2000 feet in length and is electrofished with a towed barge stream shocker. All captured trout are identified to species, measured for length, and examined for fin clips.
- Metrics used to evaluate fish populations include catch per effort by size and length frequency.



Metric Descriptions

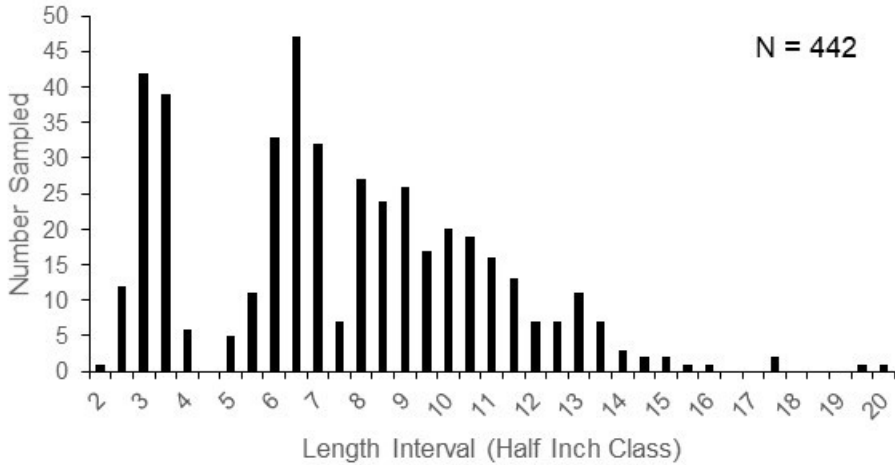
- Catch per effort (CPUE)** is an indirect method of measuring fish population relative abundance. For all trout surveys we typically quantify CPE by the number and size of trout captured per mile of stream. CPE indexes are compared to statewide streams by percentile (PCTL). For example, if a CPE is in the 90th percentile, it is higher than 90% of the other CPEs in the state. CPE percentiles can also be used to categorize trout abundance by 33rd (low density), 66th (moderate), 90th (high), and 95th (very high) benchmarks.
- Length frequency distribution** describes size structure and is the number of trout captured and grouped by one inch size intervals.



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Brown Trout Length Distribution



SIZE AND ABUNDANCE (CPUE) METRICS - BROWN TROUT

Year	Average Length (Inches)	Length Range (Inches)	Number Sampled	CPUE (Number per Mile)						
				Total and (PCTL)	YOY	>6" (PCTL)	>8" (PCTL)	>10" (PCTL)	>12" (PCTL)	>15" (PCTL)
2006	7.4	(4.7-18.2)	284	984 (85th)	245	612 (85th)	319 (85th)	116 (80th)	45 (75th)	5 (65th)
2007	6.5	(2.9-23.2)	380	1003 (85th)	253	604 (85th)	243 (80th)	111 (80th)	24 (65th)	5 (65th)
2008	7.6	(2.6-17.4)	277	731 (80th)	103	591 (85th)	303 (85th)	145 (80th)	42 (75th)	5 (65th)
2009	6.6	(2.5-12.5)	196	517 (75th)	124	314 (75th)	158 (70th)	55 (65th)	11 (50th)	0
2010	7.7	(2.8-15.8)	141	372 (65th)	55	288 (75th)	161 (75th)	79 (70th)	16 (55th)	3 (65th)
2012	7.4	(2.9-18.4)	341	900 (85th)	190	625 (85th)	340 (85th)	177 (85th)	53 (80th)	5 (65th)
2013	7.6	(2.7-15.2)	151	398 (70th)	66	288 (75th)	185 (75th)	103 (75th)	21 (60th)	3 (65th)
2014	7.1	(3.8-15.0)	219	578 (75th)	251	289 (75th)	84 (60th)	42 (60th)	21 (60th)	3 (65th)
2015	7.5	(2.7-16.8)	183	483 (75th)	114	311 (75th)	82 (60th)	42 (60th)	21 (65th)	8 (75th)
2016	7.9	(2.8-16.2)	263	694 (80th)	92	515 (85th)	203 (80th)	95 (75th)	32 (70th)	8 (75th)
2017	8.8	(3.0-19.6)	296	781 (80th)	172	594 (85th)	322 (85th)	193 (85th)	79 (85th)	21 (90th)
2018	8.9	(2.6-19.0)	337	890 (86th)	108	646 (90th)	356 (89th)	224 (92nd)	111 (94th)	32 (97th)
2019	9.4	(2.6-20.9)	126	333 (65th)	37	285 (75th)	201 (80th)	113 (80th)	58 (80th)	16 (85th)
2021	8.7	(2.3 - 20.0)	442	1167 (89th)	248	861 (93rd)	546 (93rd)	298 (95th)	119 (94th)	21 (92nd)

Summary

- The 2021 survey indicated brown trout density for adult size fish was at a high level with CPUEs ranking at the 93rd percentile for >6+inch trout. This has increased recently over the years. Since we started annually monitoring this site in 2006, **CPUEs are the highest they have been for 6+ inch brown trout, along with YOY near the highest numbers ever sampled.**
- Young of the year (YOY) numbers increased dramatically this year.
- The Willow Creek has proven to produce good numbers of mid - size (8-12 inch) trout along with good numbers of fish larger than 15 inches the last couple years. This is likely due to the excellent use of downed trees from the 2011 storm for instream cover by our habitat crew,.
- Habitat work has been done on the Willow Creek for a number of years and a good amount of public land is available for public access to the stream.
- Because of significant storm damage, with numerous trees down in the stream, the survey was not done in 2011. The fallen trees were cut, and removed to allow better fishability. Some of the cleared trees were utilized in-stream as habitat prior to survey in 2012.