WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2022

Little Willow Creek, Oneida County

1531100

Introduction And Objectives

Little Willow Creek is a cool-cold headwater stream meandering 3.11 miles within the Middle Tomahawk River watershed in northern Wisconsin. Little Willow Creek is a Class 1 trout system with sufficient natural reproduction sustaining a population of wild trout. Sampling set out to describe the trout population characteristics and asses the overall condition of the system.

DNR Contact

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Regulations

Category: Green
Daily Bag and Size Limit:
5 and none

SURVEY INFORMATION								
Station	**Survey Date**	**Station Length**	**Tempera-ture (° F)**	**Mean Stream Width**	**GPS (Start/Finish)**	**Gear**	**Dippers**	**IBI**
163 m below FR 130	08/09/2022	625 ft	58	6.2	45.76436 –90.04334	Backpack Shocker	1	80
Price County Rd	08/09/2022	741.5	60	4.2	45.757954 –90.035385	Stream Shocker	2	100

Photo Credit: Royce Zehr

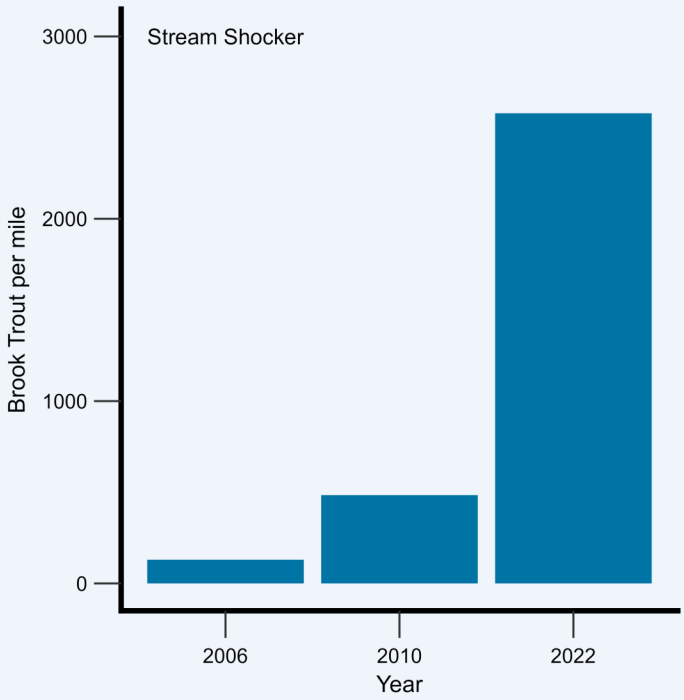
Survey Method

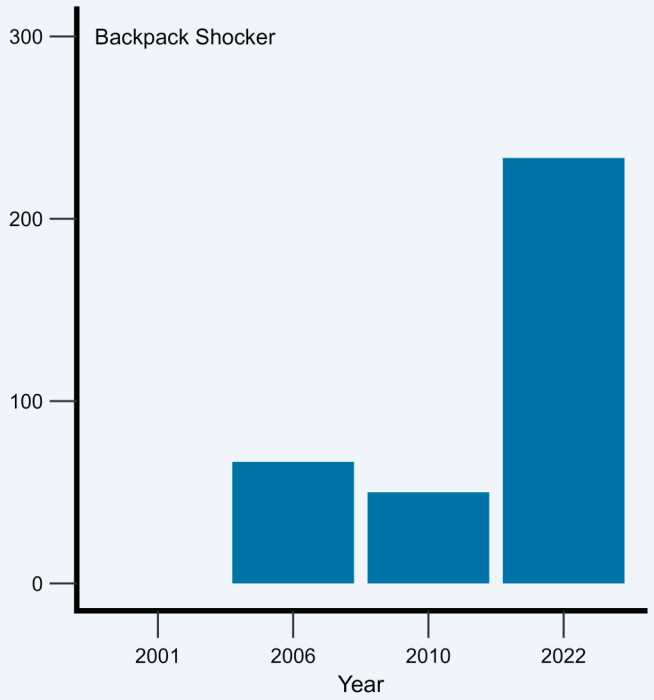
- All streams are sampled according to DNR wadeable streams monitoring protocols.
- All trout are counted and measured and all other species are counted in order to calculate an Index of Biotic Integrity (IBI) score.
- Metrics used to describe trout populations include average length, catch per unit effort (CPUE) and length frequency distribution.

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.
- **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.

SPECIES SIZE AND ABUNDANCE (CPUE) METRICS									
Station	Total Number Sampled	Average Length (inches)	Length Range (inches)	CPUE (No. per Mile) Statewide Percentile in Parentheses					
				Total CPUE	YOY CPUE	≥5" CPUE	≥8" CPUE	≥10" CPUE	≥12" CPUE
163 m below FR 130	28	6.0	2.7—8.4	233 (50)	41.7 (45)	191.7 (65)	33.3 (40)	0.0 (0)	0.0 (0)
Price County Rd	361	4.7	1.9—10.1	2578 (99)	1257.1 (90)	1285.7 (90)	207.1 (70)	7.1 (70)	0.0 (0)





Summary

- Little Willow Creek is in excellent condition. Species richness has been declining through time in Little Willow Creek, with the cool water species becoming dominate. Catch per mile of brook trout has been increasing through time and species richness has been decreasing. A decent size structure of brook trout exists in Little Willow Creek with individuals growing over 10.1 inches and the average length being 4.8 inches which is 1.7 inches below the state average. Natural reproduction supports the system with stocking 1960s. Little Willow Creek is scheduled to be sampled again in 2034.