WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2024 Little Rice Creek Survey Report

Lower Tomahawk River Watershed, Oneida County

Waterbody Code 1516900

Introduction And Objectives

The Wisconsin Department of Natural Resources (DNR) assessed the fish community in Little Rice Creek during the summer of 2024. Little Rice Creek is a cool-warm mainstem creek meandering 5.5 miles within the Lower Tomahawk River watershed in southern Oneida County. A stream shocker was used to collect all species across two transects within the Little Rice Creek. The objectives of the survey were to assess the overall health of the fishery, quantify the smallmouth bass fishery and qualitatively assess the habitat present.

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Watershed/Region Information

Third Order Miles: 5.5
HUC 10 watershed size: 133.9 mi^2
Land use: 59% forest, 30% wetland, 8% open, 4% other

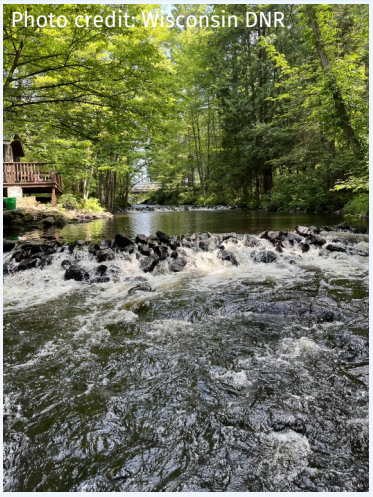


Figure 1. Downstream reach (left), upstream reach (center) and the stream shocker (right) within Little Rice Creek, Oneida County ,WI.

SURVEY INFORMATION

Reach	Site location	Survey date	Station length (ft)	Water temperature (°F)	Qualitative habitat score	Habitat status	Target species	Gear	Dippers	IBI
Upstream of CTH N	45.56927, -89.67194 45.57044, -89.67419	8/5/2024	1320	72.0	40	Fair	All	Stream shocker	2	Good
Downstream of CTH N	45.56365, -89.67464 45.56605, -89.67156	8/5/2024	897	71.0	77	Excellent	All	Stream shocker	2	Fair

Survey Method

- All reaches were sampled according to DNR wadeable/nonwadelable streams fish and habitat monitoring protocols.
- All gamefish were counted and measured.
- All other species were counted to calculate an Index of Biotic Integrity (IBI) score.
- Metrics used to describe fish populations include average length, catch per unit effort (CPUE), index of biotic integrity (IBI) and length frequency distribution.

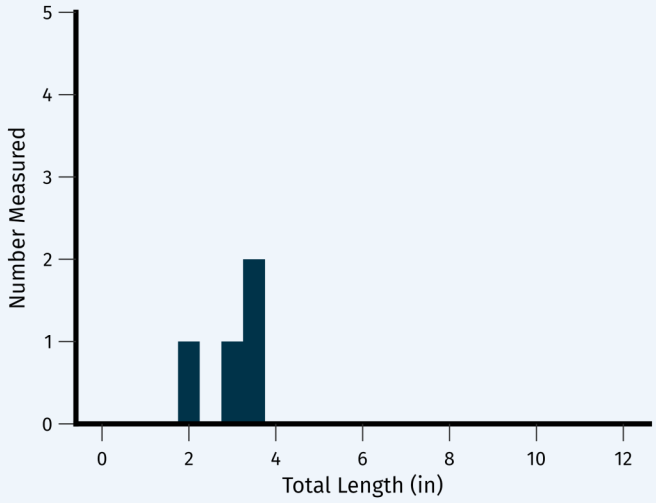
Metric Descriptions

- **Catch per unit effort (CPUE)** is a method of quantifying fish population relative abundance. For all smallmouth surveys, we typically quantify CPUE as the number of a given size class of bass captured per mile of stream.
- I**ndex 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 cool-warm streams.
- **Length frequency distribution** is a graphical representation of the number or percentage of fish captured by specified length intervals.
- **Habitat score** is a qualitative rating of the abilities to support a fishery based off the diversity and quality of fish habitat. Scores of 75-100 indicate excellent stream habitat, while scores less than 25 indicate poor stream habitat. Our assessment utilized qualitative habitat rating for streams < 10 m wide and > 10 m wide.

CATCH METRICS				
Species	**Total Catch**	**Length**	**Average**	**CPUE (#/mi)**
Largemouth bass	1	NA	NA	2.4
Logperch	10	NA	NA	23.8
Lognose dace	36	NA	NA	85.7
Northern hogsucker	7	6.0 –14.9	11.3	16.7
Northern pike	1	12.1—12.1	12.1	2.4
Rock bass	4	1.2—8.0	4.9	9.5
Smallmouth bass	5	2.4—14.5	6.5	11.9
Yellow perch	3	3.3—4.4	3.7	7.1

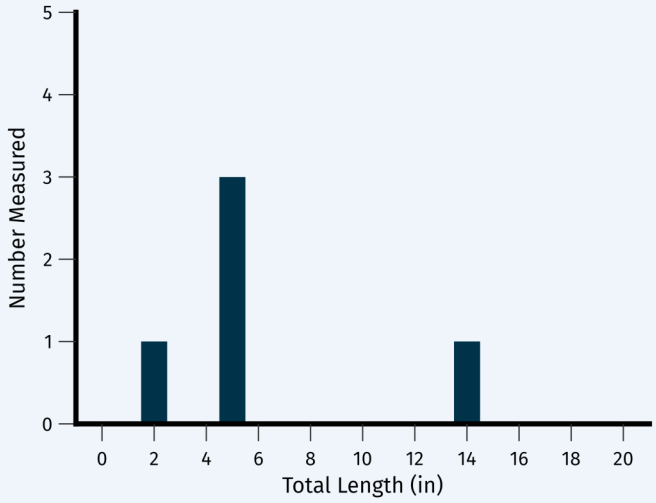
Species Summary

- Sixteen bluegill were captured. Lengths of bluegill varied between 2.2 to 3.5 inches with a mean length was of 2.7 inches. Catch rate was 38.1 bluegills per mile.



Length frequency of bluegills captured in Little Rice Creek, Oneida County, WI during the 2024 survey Lengths bin are every 0.5 inches.

- Five smallmouth bass were captured. Lengths of smallmouth bass varied between 2.4 inches to 14.5 inches. Catch rate was 11.9 smallmouth bass per mile.



Length frequency of smallmouth bass captured in Little Rice Creek, Oneida County, WI during the 2024 survey Lengths bin are every 1.0 inches.

Summary

- Little Rice Creek possessed rock riffles, rock falls, runs, pools, and fine sediment in the survey transects.
- Habitat in the lower portion of Little Rice Creek was more diverse with less sediment compared to the upstream reach.
- Habitat ranking was below the statewide average in the upper reach and above statewide average in the lower reach of Little Rice Creek.
- The fish community in Little Rice Creek was found to be in good (70) to fair (50) overall health using the IBI.
- Smallmouth bass catch rate in Little Rice Creek was below the statewide average of 102.8 per mile and Oneida county average of 14.5 per mile.
- Rock falls within Little Rice Creek may be preventing upstream fish movement during lower flow periods.