WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2024 Stream Survey Summary
Elvoy Creek, Vilas County

WBIC:713100

Introduction And Objectives

Elvoy Creek is approximately 8 miles in length running from its headwaters to the Brule River and the entire length is considered class I trout water. The stream is located in the Brule River drainage and is surrounded by Chequamegon-Nicolet National Forest. The current management strategy is to manage the stream for naturally reproducing brook and brown trout. These surveys focused on the upper stretch of Elvoy Creek located in Vilas County, occurred in August 2024 and were conducted to asses the relative abundance and size structure of brook trout, while also gathering information on the rest of the fish community.

DNR Contact

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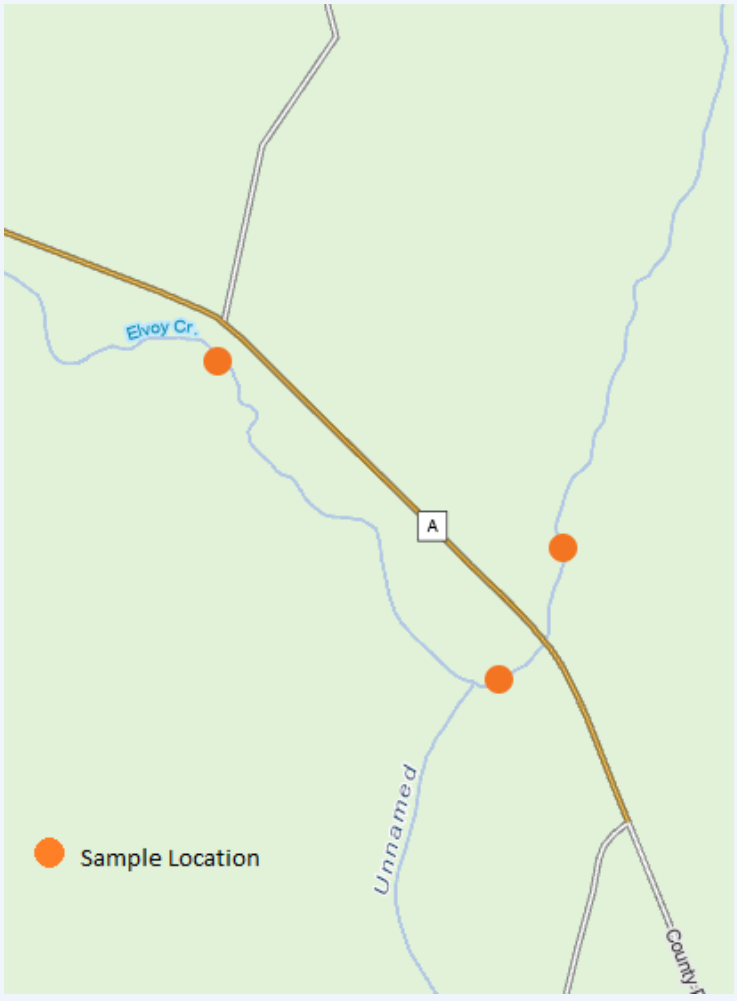
Regulations

Category: Red
Daily Bag and Size Limit:
10 inch minimum length, 3 fish daily bag limit

SURVEY INFORMATION

Station	Survey Date	Station Length (m)	Temperature (° F)	Mean Stream Width (m)	GPS (Start/Finish)	Gear	Dippers	IBI
Adjacent to Hwy A	8/12/2024	100	55	1	46.03973, -88.94430 46.04006, -88.94488	Backpack Shocker	1	Yes
Upstream of Hwy A	8/12/2024	151	60	3	46.03674, -88.93974 46.03662, -88.94128	Backpack Shocker	1	Yes
Downstream of Hwy A	8/12/2024	245	56	2	46.03859, -88.93917 46.03693, -88.93955	Backpack Shocker	1	Yes



Survey Method

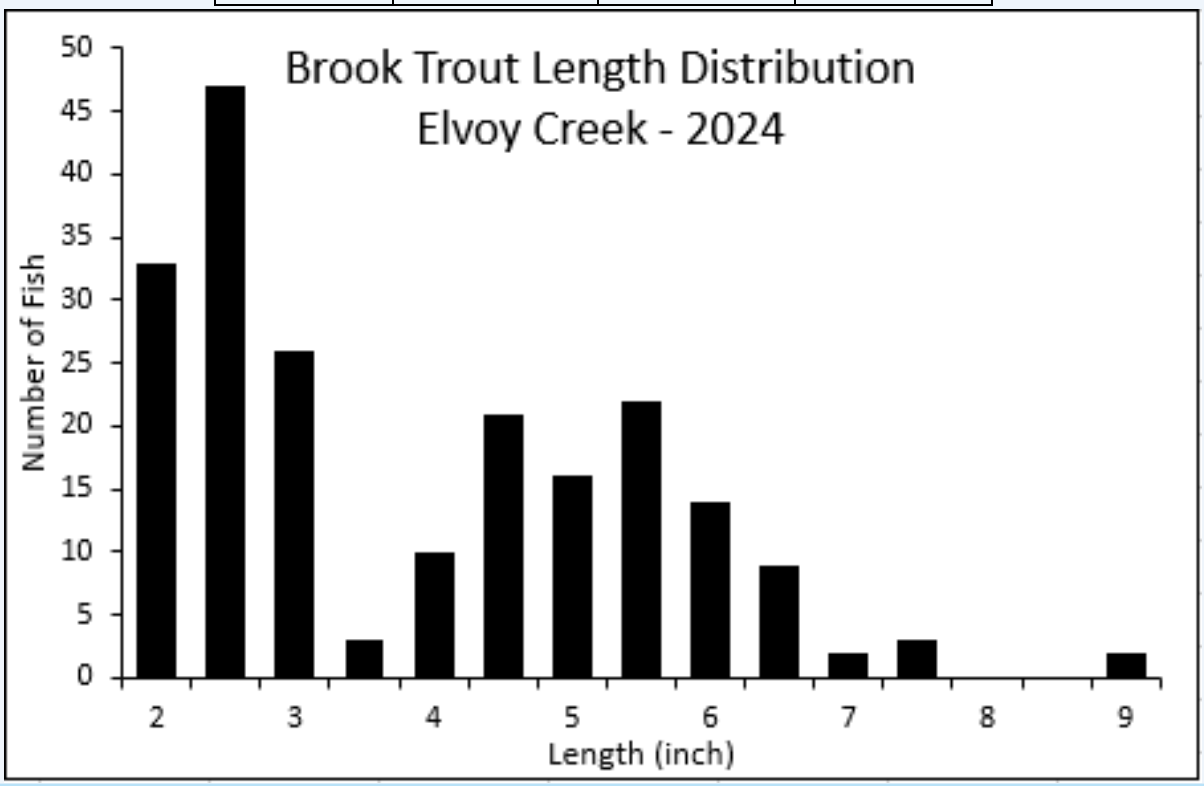
- All streams are sampled according to DNR wadable streams monitoring protocols.
- All trout are counted and measured and all other species are counted in order to calculate an Index of Biotic Integrity (IBI) score.
- Metrics used to describe trout populations include average length, catch per unit effort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

BROOK TROUT SIZE AND ABUNDANCE (CPUE) METRICS										
Station	Total Number Sampled	Average Length (inches)	Length Range (inches)	CPUE (Number per Mile)						
				Total CPUE	Young-of-Year CPUE	≥5" CPUE	≥8" CPUE	≥10" CPUE	≥12" CPUE	IBI Score
Adjacent to Hwy A	38	4.5	2.1 - 6.9	612	257	290	0	0	0	70
Upstream of Hwy A	66	4.5	2.0 - 9.0	703	234	298	11	0	0	80
Downstream of Hwy A	104	3.7	2.0 - 9.0	683	453	145	7	0	0	80

	BROOK TROUT CPE		
Year	Adjacent to Hwy A	Upstream of Hwy A	Downstream of Hwy A
2024	612	703	683
2021	306	778	578
2018	161	917	545
2015	64	309	460
2012	129	576	586



Summary

- Elvoy Creek supports a healthy naturally reproducing brook trout population with a good 2024 year class.
- Only seven brown trout were caught in the sampled areas, which is on par with past surveys.
- The habitat in surveyed sections is more suitable for brook trout than it is for brown trout.
- Results from the 2024 surveys indicate brook trout abundance remains at the same level as it was in previous surveys.
- Catch rates of harvestable sized brook trout (≥ 8”) were below average for a class I stream. However, the upper reaches of this stream are more suitable for juvenile trout, so it is not surprising to see few harvestable size fish.
- IBI scores indicate excellent stream quality for a cool/cold water stream at all sites. All stretches of the stream are able to maintain cool water temperatures throughout the summer.
- In additional to brook and brown trout the following species were caught: western blacknose dace, creek chub and mottled sculpin.