WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2024

Bearskin Creek, Oneida County

1516900

Introduction And Objectives

Bearskin Creek is a cool-warm stream meandering 10.42 miles within the Middle Tomahawk River watershed in the southwestern part of Oneida County. Bearskin Creek consists of 3.67 miles of Class 1, 3.87 miles of Class 2 and 2.88 miles of Class 3 trout waters. The Wisconsin Department of Natural Resources (DNR) replicated sampling that had been done during previous surveys seeking to describe the trout population characteristics and asses the overall condition of the system.

DNR Contact

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Regulations

Category: Yellow
Daily Bag and Size Limit:
3 daily bag, 8" minimum length

SURVEY INFORMATION

Station	Survey date	Station length (ft)	Temperature (°F)	Mean stream width (ft)	GPS (Start/Finish)	Gear	Dippers	IBI
Area adjacent to bearskin trail to bearskin rapids trestle	8/06/2024	1850	62	42	45.65479, -89.67062 45.65672, -89.66380	Stream shocker	3	NA
Lakewood road to Harshaw trestle	8/06/2024	1530	62	32	45.64983, -89.67797 45.65301, -89.67407	Stream shocker	3	90
CTH K to Lakewood road	8/06/2024	1215	58	30	45.64737, -89.68242 45.64949, -89.67873	Stream shocker	3	NA
CTH L To area adjacent to CTH K	8/07/2024	3750	58	37	45.63848, -89.70236 45.64389, -89.69786	Stream shocker	3	90
Tomahawk River to CTH L	8/07/2024	425	58	43	45.63770, -89.70706 45.63737, -89.70558	Stream shocker	3	90

Survey Method

- All stations were sampled according to DNR wadeable streams monitoring protocols.
- All trout were counted and measured and all other species were 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, typically CPUE is quantified 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)					
				Total CPUE	YOY CPUE	≥5" CPUE	≥8" CPUE	≥10" CPUE	≥12" CPUE
Area adjacent to bearskin trail to bearskin rapids trestle	187	3.9	2.1-10.4	534.3	425.7	108.6	11.4	2.9	0.0
Lakewood road to Harshaw trestle	109	4.4	2.1-9.5	375.9	224.3	131.0	24.1	0.0	0.0
CTH K to Lakewood road	334	5.2	1.9-11.0	1452.2	634.8	791.3	152.2	21.7	0.0
CTH L To area adjacent to CTH K	30	4.8	2.7-8.0	42.3	23.9	18.3	1.4	0.0	0.0
Tomahawk River to CTH L	0	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0

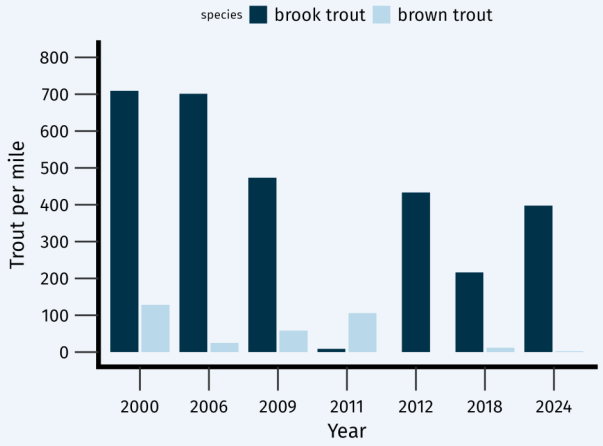

Figure 2. Stream wide catch per mile of brook trout and brown trout through time in Bearskin Creek. Brown trout were not targeted for collection in 2012.

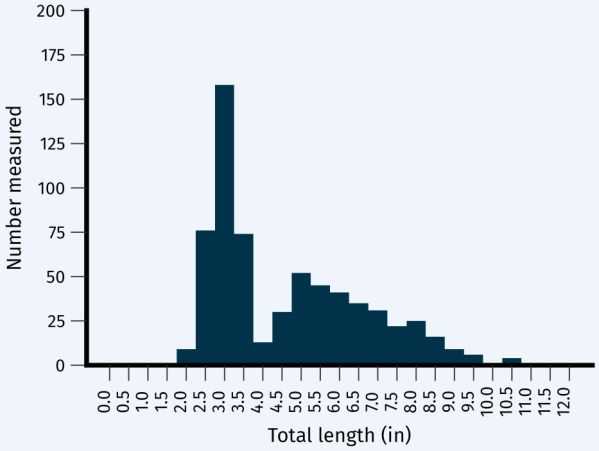

Figure 3. Brook trout stream wide size structure within Bearskin Creek. Length bins are every 0.5 inches.

Summary

- Bearskin Creek is in excellent condition with IBI scores above 90.
- Species richness in Bearskin Creek has remained around 20 species supporting a mixed fishery through time.
- Bearskin Creek has consistently maintained a fishable brook trout fishery through time and 2024 was no different (Figure 2).
- Brook trout catch was around the 75th percentile the statewide for individuals < 7.9 inches and individuals > 8.0 inches.
- Average size of brook trout remain relatively small, being 3 inches smaller than the statewide average (7.5 inches) likely being influenced by strong and consistent reproduction (Figure 3).
- Brown trout abundance has decreased since discontinuing stocking in 2019. This reduction has likely allowed more native brook trout to establish
- Beaver activity in the lower portion of Bearskin Creek altered the habitat present which may make it less conducive for brook trout.

Figure 4. Beaver dam that was partially removed from the station adjacent to CTH K allowing sampling to occur.