



WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2021 Stream Survey Report Peterson Creek, Waupaca County 275400

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Introduction And Objectives

The Peterson Creek consists of roughly 10.0 miles of Class I trout water in Waupaca County. The Peterson Creek is a tributary to the South Branch Little Wolf River which provides spawning and nursery habitat for trout populations. Fishing access consists of nine road crossings and large tracts of public land. Objectives of the rotation surveys are to determine species composition, relative abundance and size structure for trout and other game species.

DNR Contact

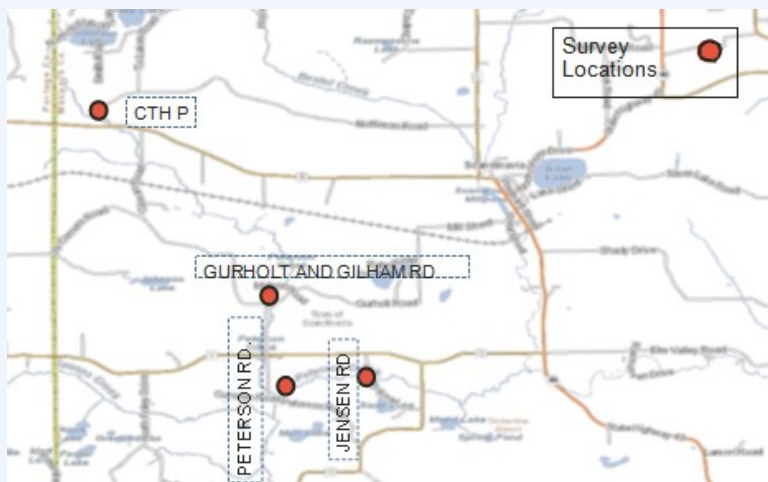
Elliot Hoffman - Fisheries Biologist Senior
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Shawano, WI 54166
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Regulations

Category: Yellow
Daily Bag and Size Limit:
Three and 8-inch minimum

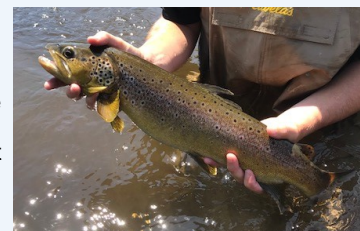
SURVEY INFORMATION

Station	Survey Date	Station Length	Temperature (° F)	Mean Stream Width	GPS (Start/Finish)	Gear	Dippers	IBI
CTH B	8/5/2021	330	56	8.2	44.472, -89.21474 44.47262, -89.21536	Barge Shocker	3	YES
Gurholt and Gilham Road	8/4/2021	922	59	27.2	44.44644, -89.18893 44.44805, -89.18725	Barge Shocker	3	NO
Peterson Road	8/5/2021	553	63	15.8	44.43372, -89.18867 44.43314, -89.18717	Barge Shocker	3	YES
Jensen Road	8/3/2021	2000	58	-	44.3589, -89.1681 44.4354, -89.1768	Barge Shocker	3	NO



Survey Method

- All streams are sampled according to DNR wadeable streams monitoring protocols.
- All sampling stations are electrofished with either a towed barge shocker or backpack shocker.
- Sampling distance is at least 35 times the mean stream width or a minimum of 330 feet (i.e., 100 meters).
- 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.



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2021 Stream Survey Report Leer Creek, Waupaca County

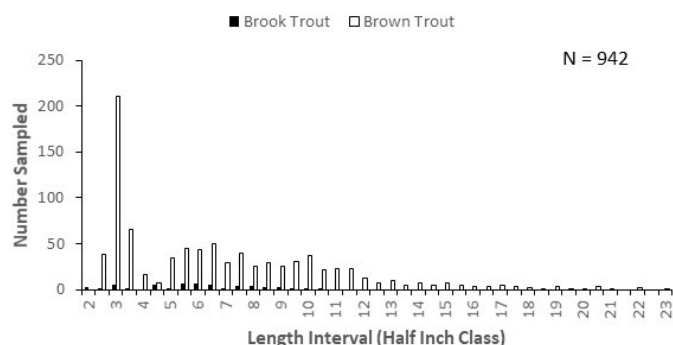
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BROOK TROUT SIZE AND ABUNDANCE (CPUE) METRICS									
Station	Total Number Sampled	Average Length (inches)	Length Range (inches)	CPUE (No. per Mile) Statewide Percentile in Parentheses					
				Total CPUE (PCTL)	YOY CPUE	≥5" CPUE (PCTL)	≥8" CPUE (PCTL)	≥10" CPUE (PCTL)	≥12" CPUE (PCTL)
CTH B	9	4.8	2.5 - 7.3	144 (43rd)	64	64 (42nd)	-	-	-
Gurholt and Gilham Road	26	7.2	3.2 - 10.8	149 (44th)	6	126 (57th)	57 (76th)	17 (85th)	-
Peterson Road	15	5.1	2.2 - 8.5	143 (43rd)	48	86 (49th)	10	-	-
Jensen Road	8	7.0	3.5 - 9.3	21 (15th)	3	18 (22nd)	8 (35th)	0	0

BROWN TROUT 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 (PCTL)	YOY CPUE	>6" CPUE (PCTL)	>8" CPUE (PCTL)	>10" CPUE (PCTL)	>12" CPUE (PCTL)	>15" CPUE (PCTL)
CTH B	162	7.2	2.6 - 13.4	2592 (96th)	288	1632 (98th)	1008 (98th)	336 (96th)	32 (71st)	0
Gurholt and Gilham Road	51	9.9	3.2 - 21.1	292 (64th)	6	252 (75th)	183 (78th)	132 (83rd)	74 (88th)	23 (93rd)
Peterson Road	359	5.4	2.6 - 20.5	2864 (97th)	2139	592 (89th)	277 (85th)	172 (87th)	76 (89th)	29 (96th)
Jensen Road	371	8.6	2.5 - 23.4	979 (86th)	169	684 (91st)	478 (92nd)	348 (96th)	177 (97th)	98 (100th)

Trout Length Distribution



SPECIES COMMUNITY AND IBI FOR PETERSON ROAD			
Species Sampled	Total	IBI Score	Integrity Rating
Brook Trout	15	50	Fair
Brown Trout	359		
White Sucker	22		
Creek Chub	134		
Common Shiner	10		
Yellow Perch	5		
Bluegill	1		
Pumpkinseed	5		
Rock Bass	1		
Longnose Dace	16		
Central Mudminnow	2		
Mottled Sculpin	20		
Southern Redbelly Dace	7		
Fantail Darter	1		
Brook Stickleback	9		
Blacknose Dace	2		
Johnny Darter	1		

SPECIES COMMUNITY AND IBI FOR CTH B			
Species Sampled	Total	IBI Score	Integrity Rating
Brook Trout	9	90	Excellent
Brown Trout	162		
Tiger Trout	1		
Mottled Sculpin	13		
Central Mudminnow	2		
White Sucker	2		

Summary

- Brown trout were found in moderate to high densities at all four of the stations with the total brown trout CPUE ranking out in the 64th thru 97th percentiles when compared to trout streams throughout Wisconsin. Brown trout 10+ inches ranked above the 80th percentile at every station. YOY brown trout were captured at all stations in moderate numbers, with the exception of Peterson Rd. which was extremely high densities.
- Brown Trout populations are doing well throughout the Peterson Creek system and provides both opportunities to catch quantity and quality sizes. Brook trout are present, but the high numbers of brown trout appear to be outcompeting the brook trout.
- The IBI scores suggests this stream is a excellent coldwater stream near the headwaters and the WI Streams Natural Community Model considers this a cool - cold headwater stream. Habitat is well protected by the large tracts of state owned land. Lower reaches of the creek have received a lower score, but still manage to be in the fair category. Agriculture and a dam may be having an impact on the fishery and the habitat.