WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2021 Stream Survey Report
Tiger Creek, Shawano County
306700

Introduction And Objectives

Tiger Creek consists of 11.4 miles of Class I trout water in Shawano County. Tiger Creek is a tributary to the South Branch Embarrass River which provides spawning and nursery habitat for trout populations. Fishing access consists of five road crossings along with easement access along the Wiouwash Trail. Objectives of the rotation surveys are to determine species composition, relative abundance and size structure for trout and other game species.

DNR Contact

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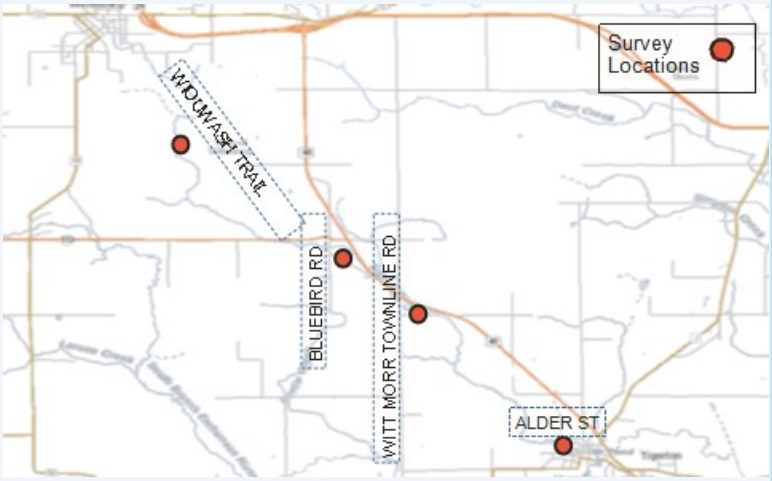
Regulations

Category: Green
Daily Bag and Size Limit:
Five and no size

SURVEY INFORMATION

Station	Survey Date	Station Length	Temperature (° F)	Mean Stream Width	GPS (Start/Finish)	Gear	Dippers	IBI
Wiouwash Trail North of HWY 153	7/13/2021	460 ft	60	12.1 ft	44.78659, -89.13951 44.7872, -89.14098	Towed-Barge Shocker	3	NO
Blubird Road	7/13/2021	480 ft	64	14.1 ft	44.78176, -89.11633 44.78132, -89.11776	Towed-Barge Shocker	3	YES
Witt Morr Townline Road	7/13/2021	410 ft	65	12.1 ft	44.77087, -89.10313 44.77163, -89.10355	Towed-Barge Shocker	3	NO
Alder Street	7/20/2021	609 ft	64	17.7 ft	44.7439, -89.07136 44.74364, -89.0731	Towed-Barge Shocker	3	NO



Survey Method

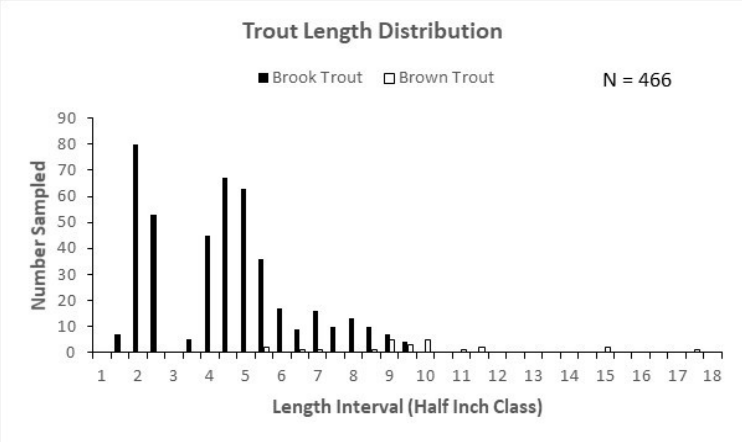
- All streams are sampled according to DNR wadeable streams monitoring protocols.
- All sampling stations are electrofished with either a towed barge shocker or backpack shocker.
- Sampling distance is at least 35 times the mean stream width or a minimum of 330 feet (i.e., 100 meters).
- All trout are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

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)
Wiouwash Trail	97	5.6	1.9 - 9.6	1114 (88th)	126	735 (94th)	92 (86th)	-	-
Bluebird Road	236	3.7	1.6 - 8.4	2596 (97th)	1353	462 (88th)	33 (65th)	-	-
Witt Morr Townline Road	19	8.2	5.6 - 9.5	245 (55th)	0	245 (73rd)	155 (93rd)	-	-
Alder Street	90	5.5	1.9 - 9.8	780 (82nd)	95	520 (90th)	95 (86th)	-	-

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)
Wiouwash Trail	3	9.0	7.4 - 9.9	34 (27th)	0	34 (35th)	23 (38th)	-	-	-
Witt Morr Townline Road	1	11.3	-	13 (13th)	13	13 (18th)	13 (40th)	13 (40th)	-	-
Alder Street	20	10.2	5.6 - 17.7	173 (53rd)	0	156 (64th)	147 (73rd)	87 (75th)	17 (61st)	17 (90th)



SPECIES COMMUNITY AND IBI FOR BLUEBIRD RD.			
Species Sampled	Total	IBI Score	Integrity Rating
Brook Trout	236	60	Good
White Sucker	20		
Creek Chub	67		
Longnose Dace	2		
Central Mudminnow	7		
Johnny Darter	1		
Green Sunfish	1		

Johnny Darter (pictured above) is a small nongame species commonly found in streams throughout the state of Wisconsin.

Summary

- Brook trout were found in moderate - high densities at three of the four stations, with the total brook trout CPUE ranking out in the 55th - 97th percentiles when compared to trout streams throughout Wisconsin. At least three distinct year classes of brook trout were captured at Bluebird Bluebird Road YOY brook trout were captured at Bluebird Road in high densities, but larger trout 10+ inches were not sampled in any of the survey sites.
- The Bluebird Road station was last sampled in 2015 and has shown a dramatic improvement in numbers of brook trout but size structure metrics have remained similar.
- Brown trout numbers have increase in the last 6 years and were observed at three of the four sites of the Tiger Creek.
- Cold water and spawning substrate at the Bluebird Road sample station suggest this stretch of stream has excellent habitat for trout spawning and should be preserved and maintained into the future.
- The IBI scores suggests this stream is an good coldwater stream and the WI Streams Natural Community Model considers this a cool - cold headwater stream. Habitat should be protected and should able to do so with the large tracts of state owned land.