2021 Stream Survey Report

Upper Pine River

(WBIC 247800)

Waushara County

INTRODUCTION AND OBJECTIVES

The Upper Pine River consists of about 5 miles of Class I trout water. The Upper Pine River just northwest corner of Wild Rose, flows southeast into Wild Rose millpond. Below the dam is another 23 miles of river which has multiple dams throughout the system before flowing into Lake Poyan. The Upper Pine River is managed as a mixed brook and brown trout fishery with brook trout as the dominant gamefish. Historically brown trout have been removed as an effort to protect the brook trout. Objectives of the trend survey are to monitor relative abundance and size structure.

Regulations Category: Red **Size Limit:** None **Daily Bag Limit:** 3(in total)

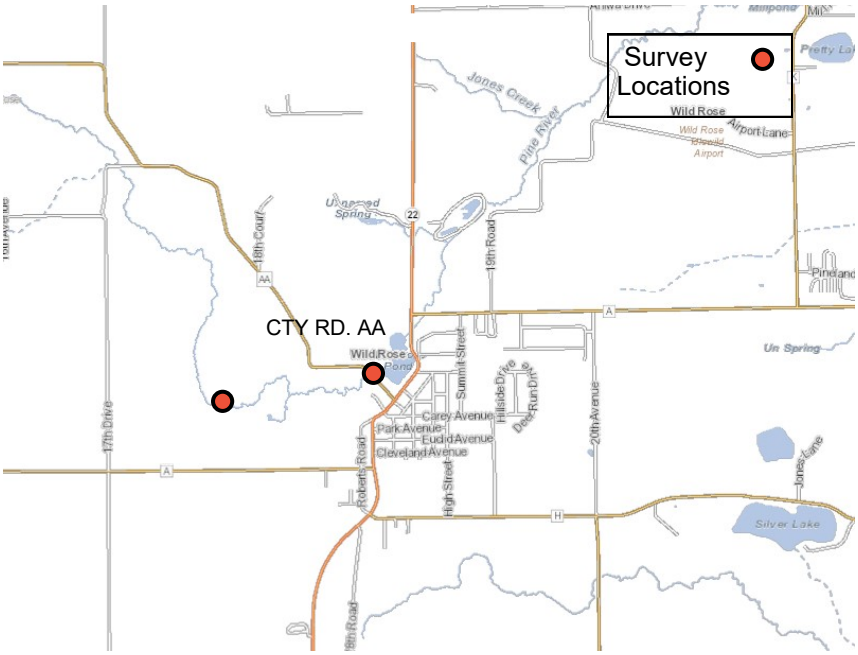
WISCONSIN DNR CONTACT INFO.

Scott Bunde - Fisheries Biologist Senior
Wisconsin Dept. of Natural Resources
427 East Tower Dr.
Wautoma, WI 54982

Phone: 920-424-3059
E-mail: scott.bunde@wisconsin.gov

SURVEY INFORMATION

Site location	Survey Date	Station Length	Water Temperature (°F)	GPS (Start/Finish)	Gear	Number of Netters
Millpond to RR Grade	9/16/2021	7000 ft.	53	44.18043, -89.25092 44.17825, -89.26492	Towed Barge Shocker	3



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 the state of 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).

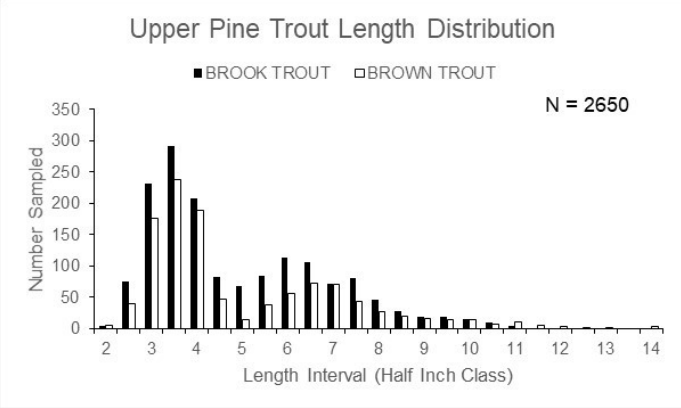
- **Length frequency distribution** is a graphical representation of the number or percentage of fish captured by half inch or one inch size intervals.

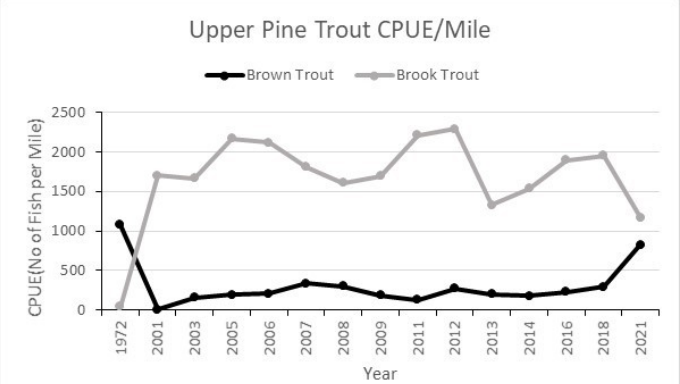
Survey Methods

- The Upper Pine River trend site has been surveyed since 1972. This particular station was 7000 feet and data has been separated at the half way point. The station is electrofished with a towed barge streamshocker. All captured trout are Identified to species, measured for length, and examined for fin clips.
- Metrics used to evaluate fish populations include catch per unit effort by size class and length frequency distributions.

UPPER PINE RIVER TREND SITE

(WBIC 247800)





SIZE AND ABUDANCE (CPUE) METRICS - BROOK TROUT

Year	Average Length (inches)	Length Range (inches)	Number Sampled	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)
1972	-	-	50	43 (24th)	26	14 (16th)	2 (28th)	0	0
2001	5.9	2.0 - 12.7	2262	1706 (94th)	1091	517 (89th)	112 (89th)	14 (80th)	1 (88th)
2003	5.9	2.6 - 10.5	2213	1669 (94th)	837	753 (94th)	73 (81st)	2 (62nd)	0
2005	6.0	2.4 - 11.3	2876	2169 (96th)	1036	1064 (97th)	175 (94th)	20 (86th)	0
2006	6.4	2.7 - 12.6	2808	2118 (96th)	1072	873 (95th)	72 (81st)	4 (64th)	1 (88th)
2007	6.0	2.7 - 10.5	2404	1813 (95th)	753	779 (95th)	61 (78th)	4 (64th)	0
2008	6.4	2.7 - 10.9	2134	1610 (93rd)	850	662 (93rd)	56 (76th)	2 (62nd)	0
2009	6.3	2.7 - 11.1	2244	1693 (94th)	931	645 (92nd)	48 (73rd)	4 (64th)	0
2011	6.7	2.9 - 12.0	2936	2215 (96th)	878	1022 (97th)	186 (95th)	14 (80th)	2 (89th)
2012	4.7	2.4 - 12.1	3042	2295 (96th)	1137	868 (95th)	71 (81st)	9 (74th)	1
2013	6.5	0.8 - 10.8	1764	1331 (91st)	502	451 (87th)	68 (80th)	7 (70th)	0
2014	6.3	2.9 - 11.1	2039	1538 (93rd)	648	328 (81st)	34 (65th)	3 (63rd)	0
2016	6.5	2.8 - 12.3	2511	1894 (95th)	803	636 (92nd)	97 (87th)	8 (72nd)	2 (89th)
2018	6.1	2.2 - 11.4	2596	1958 (95th)	827	765 (94th)	138 (92nd)	16 (82nd)	0
2021	5.8	2.2 - 11.0	1550	1169 (87th)	453	498 (89th)	105 (88th)	21 (87th)	0

SIZE AND ABUNDANCE (CPUE) METRICS - BROWN TROUT

Year	Average Length (inches)	Length Range (inches)	Number Sampled	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)
1972			1243	1076 (88th)	187	441	172 (76th)	39 (60th)	10 (50th)	3 (65th)
2001	6.6	5.5 - 8.2	7	5 (3rd)	0	4 (6th)	1 (12th)	0	0	0
2003	4.6	3.1 - 9.6	211	159 (51st)	54	35 (36th)	1 (12th)	0	0	0
2005	4.8	2.6 - 13.7	258	195 (56th)	84	35 (36th)	15 (30th)	9	2 (38th)	0
2006	5.0	2.5 - 8.0	273	206 (57th)	70	75 (50th)	0	0	0	0
2007	6.2	2.5 - 11.5	452	341 (67th)	183	83 (53rd)	12 (27th)	2 (25th)	0	0
2008	5.6	2.5 - 11.5	403	304 (64th)	175	75 (50th)	12 (27th)	2 (25th)	0	0
2009	5.9	2.4 - 10.1	246	186 (54th)	83	55 (44th)	7 (20th)	2 (25th)	0	0
2011	7.7	2.9 - 14.2	173	130 (48th)	42	45 (39th)	28 (41st)	20 (48th)	7 (46th0	0
2012	6.0	2.6 - 13.3	358	270 (62nd)	130	73 (50th)	14 (29th)	3 (26th)	1 (37th)	0
2013	7.3	3.0 - 15.2	271	204 (57th)	70	64 (47th)	33 (45th)	15 (42nd)	5 (42nd)	1 (62nd)
2014	6.6	2.7 - 13.9	241	182 (54th)	38	84 (53rd)	26 (40th)	11 (38th)	2 (38th)	0
2016	7.3	2.7 - 19.7	306	231 (59th)	43	134 (61st)	46 (50th)	11 (38th)	5 (42nd)	1 (62nd)
2018	6.6	2.3 - 15.2	387	292 (64th)	139	116 (59th)	33 (45th)	14 (41st)	2 (38th)	1 (62nd)
2021	6.9	2.1 - 14.2	1100	830 (84th)	345	271 (76th)	88 (63rd)	32 (56th)	5 (42nd)	0

Summary

- Results from the 2021 survey showed that brook trout continue to be the dominant trout species in the Upper Pine River but have declined over the years, as the number of brown trout continue to increase. Smaller sized brook trout have remained at high density levels for years, of concern is the declining numbers of brook trout. While at the same time increasing numbers of brown trout above the Wild Rose millpond.
- Brook trout young of year (YOY) relative abundance has declined recently, falling below the average of YOY 709 per mile of electrofishing. Continued consistent recruitment should ensure a good brook trout fishery into the future.
- Total brown trout CPUE and CPUE of all adult size classes (i.e., ≥ 6 inches) of brown trout in 2021 has increased as the removal of brown trout stopped in 2010. Not surprisingly, catch rates of YOY brown trout in 2021 were the highest recorded since this survey started.
- The Upper Pine River would be a good stream to focus on easement acquisition and future habitat development. This unique fishery which was temporarily reverted back to a brook trout fishery appears to be once again turning back into a brown trout fishery.