



2013 Stream Survey Report

North Branch Embarrass River TREND (WBIC 301300)

Shawano County

Prepared by Al Niebur and Top Moon Lee

Introduction and Survey Objectives

The North Branch Embarrass River consists of 34.75 miles of Class I, II, and III trout water. It is located in Shawano County and is part of the Embarrass River watershed. It is managed as a mixed brook and brown trout fishery with brook trout as the dominant salmonid. Warmer summer temperatures are a limiting factor in the lower reaches from Bowler downstream to Tilleda. Fishing access is limited to road crossings and two county managed public fishing areas. Objectives of the trend survey are to monitor relative abundance and size structure.

Regulations: Survey Section- Category 2

Size Limit: All Trout - 7 inches

Daily Bag Limit: 5 (in total)

WISCONSIN DNR CONTACT INFO.

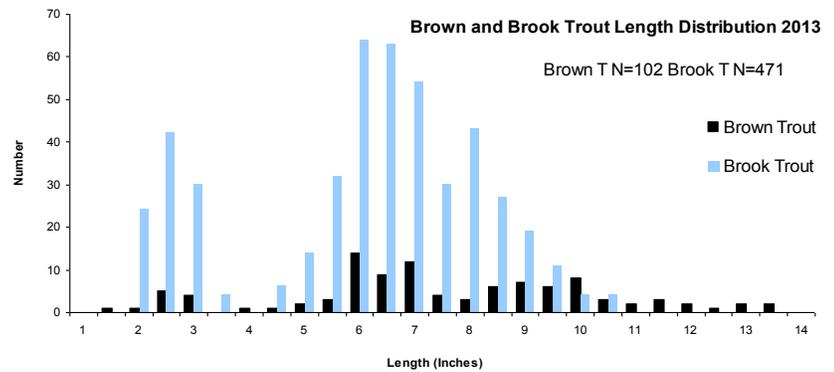
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Survey Information					
Site location	Survey Date	Station Length	GPS (Start/Finish)	Gear	Dippers
CTY D TREND	7/23/2013	2095 ft.	44.9034,-89.0344 44.9056,-89.0366	Towed Barge Shocker	3



Survey Methods

The North Branch Embarrass River trend site has been surveyed annually since 2005 with exception to year 2006. This particular station is 2095 feet in length and is electrofished with a towed barge streamshocker. All captured trout are identified to species, measured for length, and examined for fin clips.



Catch per Effort (CPE) and Length Frequency

- Catch per effort (CPE) is an indirect method of measuring fish population relative abundance. For all trout surveys we typically quantify CPE by the number and size of trout captured per mile of stream. CPE indexes are compared to statewide streams by percentile (PCTL). For example, if a CPE is in the 90th percentile, it is higher than 90% of the other CPEs in the state. CPE percentiles can also be used to categorize trout abundance by 33rd (low density), 66th (moderate), 90th (high), and 95th (very high) benchmarks.
- Length frequency distribution describes size structure and is the number of trout captured and grouped by one inch size intervals.

Catch per Effort (Brown Trout)							
Year	Average Length and (Range)	Total (PCTL)	YOY	>6" (PCTL)	>9"	>12" (PCTL)	>15" (PCTL)
2005	7.1 (2.7-11.4)	43	13	30	15	0	0
2007	7.7 (2.8-17.7)	116 (45th)	3	86 (50th)	38	5 (40th)	3 (35th)
2008	6.6 (2.0-12.5)	93 (40th)	28	65 (60th)	28	3 (40th)	0
2009	7.0 (2.2-13.9)	270 (60th)	15	186 (65th)	45	5 (40th)	0
2010	7.6 (2.3-14.8)	154 (50th)	23	123 (60th)	50	5 (40th)	0
2011	7.6 (2.5-14.6)	229 (60th)	13	204 (70th)	45	8 (45th)	0
2012	8.4 (3.0-17.9)	448 (70th)	10	368 (80th)	202	35 (70th)	5 (70th)
2013	7.8 (1.9-13.7)	257 (60th)	28	212 (70th)	91	18 (60th)	0

Catch per Effort (Brook Trout)							
Year	Average Length and (Range)	Total (PCTL)	YOY	>5" (PCTL)	>8" (PCTL)	>10"	>12" (PCTL)
2005	4.6 (1.9-8.9)	1494	592	710	15	0	0
2007	5.1 (2.0-10.0)	1219 (90th)	254	605 (90th)	60 (80th)	3	0
2008	5.6 (1.9-9.5)	1501 (90th)	264	809 (95th)	65 (80th)	0	0
2009	4.8 (1.5-10.0)	2217 (95th)	481	1073 (95th)	53 (75th)	3	0
2010	5.2 (1.9-10.0)	1521 (90th)	413	997 (95th)	40 (70th)	3	0
2011	6.0 (2.0-10.3)	1997 (95th)	249	1537 (95th)	139 (90th)	5	0
2012	6.2 (0.7-10.4)	2861 (95th)	161	2166 (95th)	418 (95th)	5	0
2013	6.3 (2.1-10.8)	1285 (90th)	252	919 (95th)	272 (95th)	20	0

Results and Discussion

- The 2013 survey indicated brown trout density for adult size fish was at moderate levels with CPEs ranking at the 66th percentile for 6+ inch trout and 33rd percentile for 12+ and 15+ inch trout. Density of 6+ inch trout has increased almost 200% in 2008 and has remained at that level.
- Brown trout young of year relative abundance was higher than the last survey and similar to the 10 year average.
- Brook trout density for adult size fish was at high levels with CPEs ranking in the 95th percentile for 5+ and 8+ inch trout. CPEs for 8+ inch trout have maintained at high levels since 2011.
- Brook trout young of year relative abundance was slightly higher than the last year and similar to the 10 year average.
- The current regulation appears to be working well and no changes are recommended at this time.
- The North Branch Embarrass River would be a good stream to focus easement acquisition and future habitat development.