



2021 STREAM SURVEY REPORT

WEST BRANCH WHITE RIVER

(WBIC 151700)

WAUSHARA COUNTY

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INTRODUCTION AND OBJECTIVES

West Branch White River is a Class I trout stream which consists of 15.9 miles of trout water. It originates in Waushara County and flows southeast into the White River. Fishing access consists of 6 road crossings, and flows through the White River fishery area properties. The White River system is one of only a handful of systems in the state which have reproducing brown, brook and rainbow trout. Objectives of these surveys are to assess the new regulation enacted in 2016, monitor the rainbow trout fishery, determine relative abundance and size structure for all trout.

Regulations: Entire Stream - **Red** Size Limit: Rainbow trout over 12" brown and brook trout over 8" Daily Bag Limit: 3 (in total)

WISCONSIN DNR CONTACT INFO.

Scott Bunde - Fisheries Biologist Senior

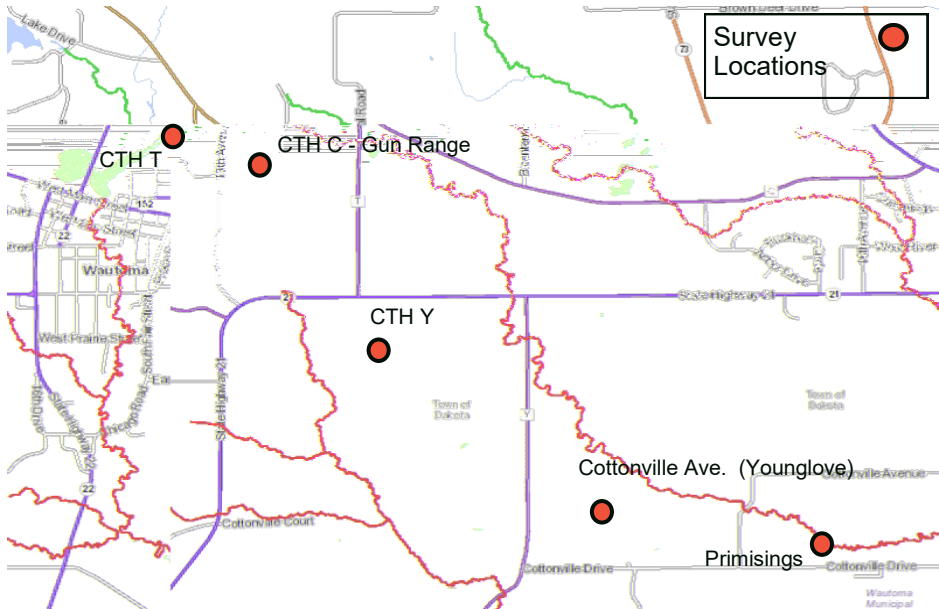
Wisconsin Dept. of Natural Resources
427 E. Tower Drive, Suite 100
Wautoma, WI 54982

Phone: 920 - 787 - 5683

E-mail: scott.bunde@wisconsin.gov

SURVEY INFORMATION

Station	Survey Date	Station Length	Temperature (°F)	GPS (Start/Finish)	Gear	Dippers	IBI
CTH T	7/29/2021	1750 ft	63	44.08039, -89.3265 44.08035, -89.3548	Barge Shocker	3	NO
CTH C - Gun Range	8/18/2021	2000 ft	57	44.07683, -89.34406 44.07904, -89.3469	Barge Shocker	3	NO
CTH Y	8/18/2021	1250 ft	59	44.05179, -89.31542 44.05220, -89.31835	Barge Shocker	3	YES
Cottonville Ave.	7/28/2021	1000 ft	60	44.05512, -89.32805 44.05635, -89.33101	Barge Shocker	3	NO
Primisings	8/5/2021	2000 ft	60	44.0493, -89.299 44.04973, -89.30318	Barge Shocker	3	NO



SURVEY METHOD

- All streams are sampled according to DNR wadable streams monitoring protocols. West Branch White River is on a 3 year rotation schedule with five sites identified for the segment of stream in Waushara County
- 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) 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 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.
- **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.





2021 STREAM SURVEY REPORT - CONTINUED

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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 T	810	7.1	2.1 - 14.6	2444 (96th)	1358	697 (91st)	350 (88th)	136 (83rd)	27 (68th)	-
CTH C - Gun Range	832	6.6	2.2 - 16.4	2196 (95th)	734	953 (95th)	483 (92nd)	145 (84th)	13 (56th)	3 (66th)
CTH Y	320	7.6	2.4 - 15.2	1690 (93rd)	734	792 (92nd)	523 (93rd)	259 (93rd)	74 (88th)	5 (69th)
Cottonville Ave. - Younglove	246	8.3	2.8 - 16.4	1039 (87th)	34	879 (94th)	566 (94th)	253 (92nd)	84 (90th)	13 (86th)
Primisings	488	8.2	3.0 - 15.6	1288 (90th)	169	1038 (96th)	541 (93rd)	198 (89th)	53 (83rd)	8 (77th)

RAINBOW TROUT SIZE AND ABUNDANCE (CPUE) METRICS

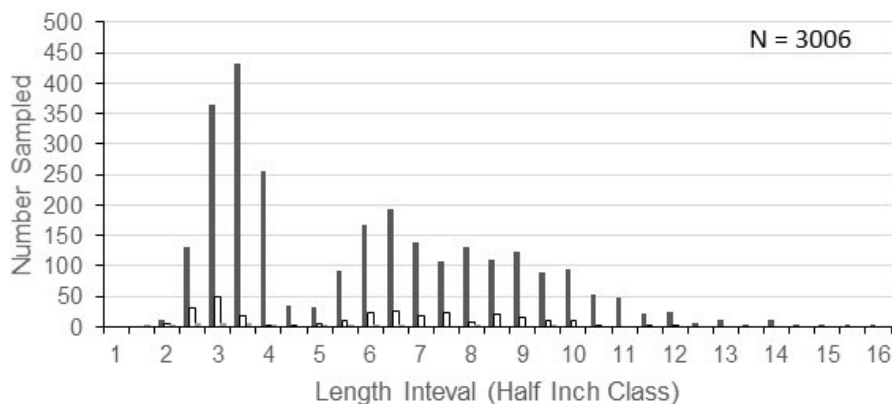
Station	Total Number Sampled	Average Length (inches)	Length Range (inches)	CPUE (No. per Mile)					
				Total CPUE (PCTL)	YOY CPUE	≥5" CPUE (PCTL)	≥8" CPUE (PCTL)	≥10" CPUE (PCTL)	≥12" CPUE (PCTL)
CTH T	84	5.9	2.1 - 9.9	253	109	145	45	-	-
CTH C - Gun Range	139	6.7	2.3 - 11.8	367	174	185	84	16	-
CTH Y	12	5.7	2.6 - 9.1	63	11	48	11	-	-
Cottonville Ave. - Younglove	8	7.9	5.9 - 10.6	34	-	34	13	8	-
Primisings	34	8.3	5.4 - 12.4	90	-	90	37	13	3

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 T	32	4.2	1.8 - 9.6	97 (37th)	63	27 (27th)	9 (37th)	-	-
CTH C - Gun Range	1	4.0	-	3 (1st)	0	-	-	-	-

WB White River - Trout Length Distribution

■ BROWN TROUT □ RAINBOW TROUT ■ BROOK TROUT



SPECIES COMMUNITY AND IBI FOR CTH Y

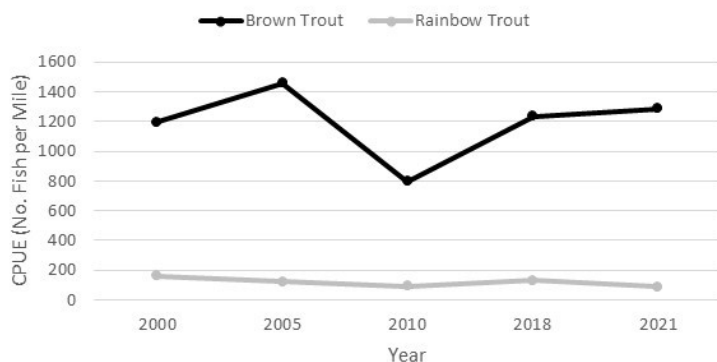
Species Sampled	Total	IBI Score	Integrity Rating
Brown trout	320	80	Good
Rainbow trout	12		
White sucker	7		
Mottled sculpin	86		
Brook lamprey	30		
Bluegill	1		
Largemouth bass	5		



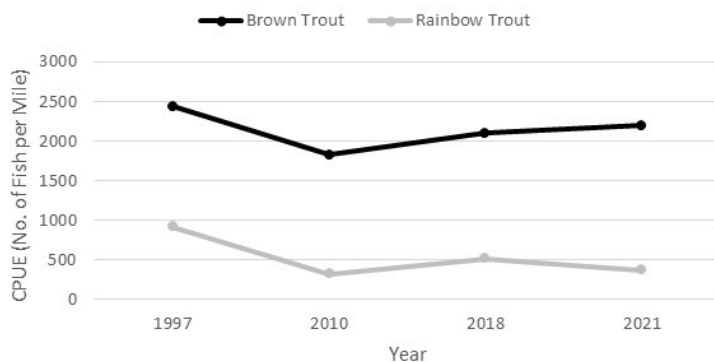
Photo by Scott Bumde - Wautoma DNR Fisheries



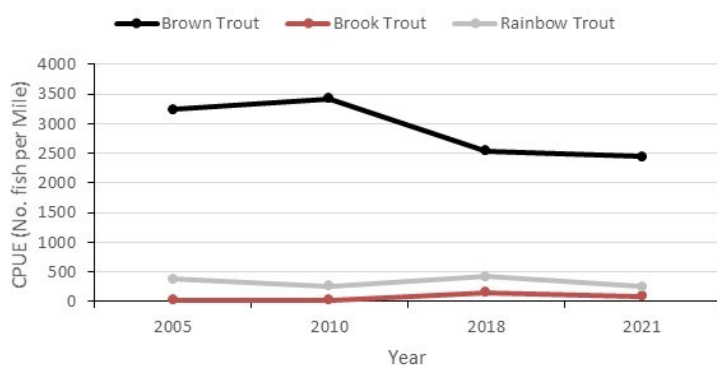
WB White River - Primising Site Trout CPUE/Mile



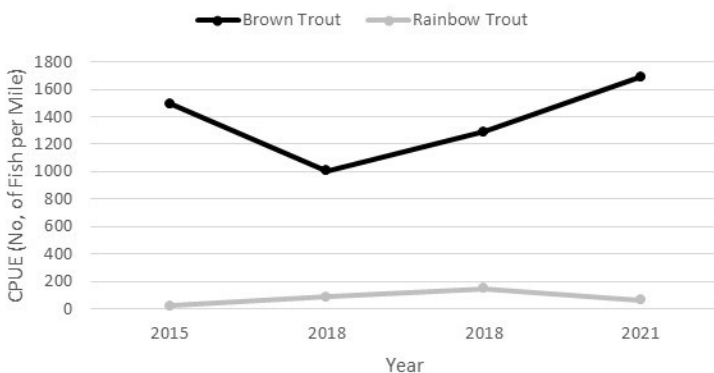
WB White River - Gun Range Trout CPUE/Mile



WB White River - CTH T Trout CPUE/Mile



WB White River CTH Y (Younglove Property) Trout CPUE/Mile



SUMMARY

- Brown trout were found in high densities at all five of the stations with the total brown trout CPUE ranking out in the 87th thru 96th percentiles when compared to trout streams throughout Wisconsin. Brown Trout 10+ inches ranked above the 93rd percentile at CTH Y - Younglove Property. YOY brown trout were captured in the highest densities the further up in the watershed that sampling occurred.
- Rainbow trout Total CPUE's have declined at every station since the highest densities seen in 2018. Brown trout densities have remained relatively stable with the exception of the Cottonville Ave. - Younglove site which has shown a dramatic increase since the last survey there in 2015.
- Brown and Rainbow trout populations are doing well throughout the West Branch White River system and provides both opportunities to catch quantity and quality sizes of both species of trout.
- The IBI scores suggests this stream is a good coldwater stream and the WI Streams Natural Community Model considers this a cool - cold headwater stream. Habitat should be protected and should be able to do so with the large tracts of state owned land.
- This unique fishery which includes naturally reproducing rainbow trout should be protected and maintained through habitat maintenance and improvement.

