WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Hunting River Five Year Post Habitat Restoration Survey Report

Hunting River, Langlade County

Waterbody Code: 383400

Introduction And Objectives

The Hunting River starts near Elcho, WI at the outlet of Otter Lake in northwestern Langlade County. It flows southeasterly 17.9 miles through the county where it joins the Wolf River in Pearson, WI. The Hunting River is a class one trout stream that is home to naturally reproducing populations of both brook and brown trout. The Hunting River has a history of negative impacts from logging, agricultural practices, and beaver activity. Fish habitat impairments included: widening and shallowing of the stream channel and loss of complex wood and rock habitat. In 2019 the Wisconsin Department of Natural Resources (WDNR) conducted a stream habitat restoration project on the Hunting River in the State Fishery Area and County Forest property off County Highway T and Field Road. This project was 2,600 feet in length and included the following work: tag alder brushing, channel shaping to deepen and narrow the stream channel resulting in the creation of 13-point bars, the installation of 40 whole trees, the installation of 75 small rocks and 75 large rocks. The following report summarizes changes in trout population relative abundance and size within the project area.

WDNR Contact

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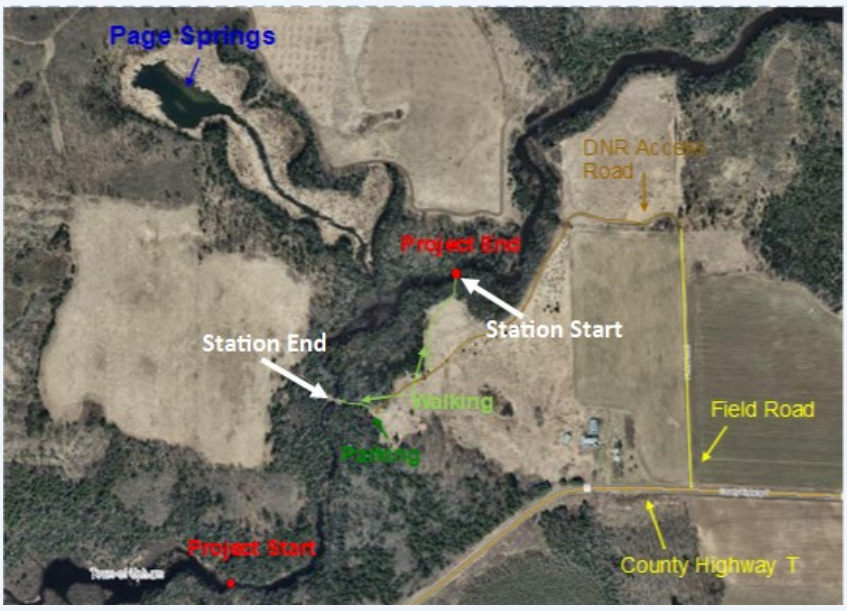
Regulations

Category: **Red**,
Daily Bag and Size Limit:
3 trout in total: brown and rainbow trout over 12", brook trout over 8".

SURVEY INFORMATION

Station	Survey Date	Station Length	Temperature (°F)	GPS (Start/Finish)	Gear	Dippers
Habitat Project Below Pages Bridge	06/18/2019 (Pre Survey) 08/14/2024 (Post Survey)	1261 ft	62 64	45.37478, -89.06535 (Start) 45.37305, -89.06808 (Finish)	Towed Barge Stream Shocker	2



Survey Methods

- This stream was sampled according to WDNR wadeable streams monitoring protocols.
- This was a new station 1,261 feet in length, established to evaluate the response of trout populations to the habitat restoration project.
- All trout and sport fish were counted and measured. All other species were noted on a scale of relative abundance.
  - Present (1-9)
  - Common (10-99)
  - Abundant (100 or more)
- Metrics used to describe trout populations include length range, length frequency distribution, catch per unit effort (CPUE), and Relative Stock Density (RSD).

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 and size of trout captured per mile of stream. CPUE indexes are compared to statewide streams using percentiles (PCTL). For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state.
- **Length frequency distribution** describes trout size structure. It is the number of trout captured grouped by half-inch size intervals.
  - **Young of the year (YOY)** are trout that are less than 4 inches in size
  - **Adults** are trout that are at least 4 inches and greater
- **Relative stock density (RSD)** the percentage of trout that meet a minimum size (4 inches for stream trout) that are also over a quality size for that species. For example, RSD8 is the percentage of brook trout captured that were 8 inches and longer out of all brook trout captured that were at least 4 inches long (typically age 1 and older adult fish).

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BROOK TROUT SIZE AND ABUNDANCE (CPUE) METRICS

Station	Total Number Sampled	CPUE (No. per Mile)						Statewide Percentile		
		Adult	YOY	6"+	8"+	10"+	12"+	YOY CPUE	≥8"CPUE	≥12"CPUE
Habitat Project Below Pages Bridge (2019 Survey)	42	142.4	33.5	75.4	25.1	8.4	0	65th	70th	90th
Habitat Project Below Pages Bridge (2024 Survey)	68	192.6	92.1	167.5	75.4	25.1	8.4	75th	85th	95th

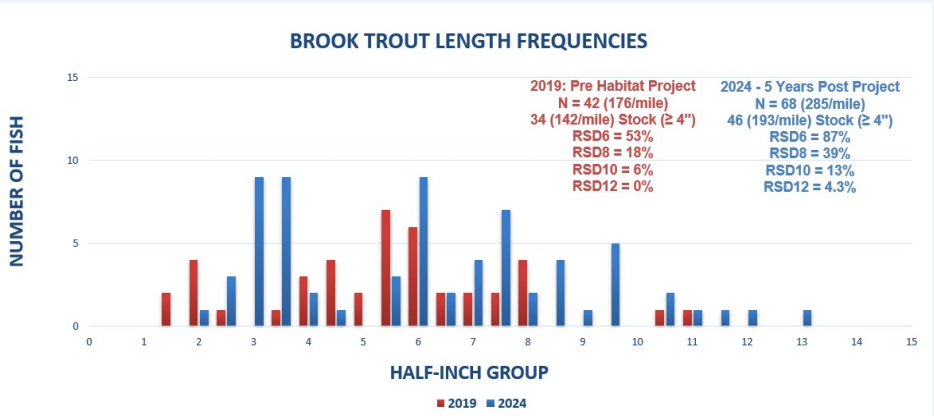

Photo Credit: Wisconsin DNR

BROWN TROUT SIZE AND ABUNDANCE (CPUE) METRICS

Station	Total Number Sampled	CPUE (No. per Mile)						Statewide Percentile		
		Adult	YOY	8"+	12"+	16"+	20"+	YOY CPUE	≥12"CPUE	≥18"CPUE
Habitat Project Below Pages Bridge (2019 Survey)	6	25.1	0	0	0	0	0	65th	60th	90th
Habitat Project Below Pages Bridge (2024 Survey)	57	171.7	67.0	96.3	46.1	37.7	8.4	80th	80th	95th

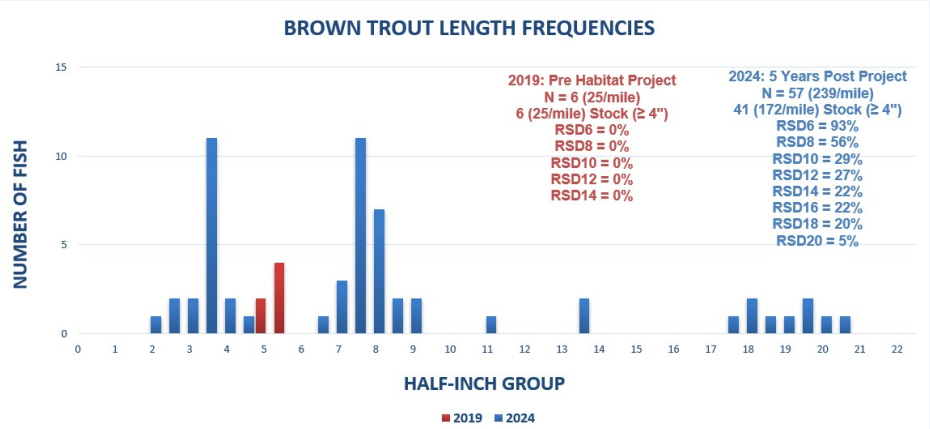

Photo Credit: Wisconsin DNR

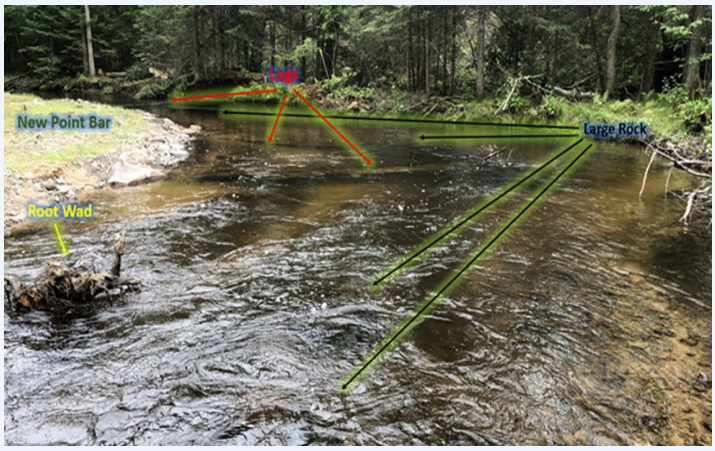

Photo Credit: Wisconsin DNR

Summary

- In the 2024 post habitat evaluation survey, increases in relative abundance and size structure were observed for brown and brook trout. Brook trout CPUE increased 60.1%
  - The percentage of 8 inch (legal) and larger brook trout (RSD8) increased 21 percentage points from 18 percent in 2019 to 39 percent in 2024.
  - Trophy class brook trout (≥ 13 inches) placed in the 95th percentile in 2024 survey.
  - Brown trout CPUE increased 856%
  - There were no brown trout 6 inches and larger in the 2019 survey. In the 2024 survey 27 percent of the brown trout were 12 inches (legal) and larger (RSD12).
  - Trophy class brown trout (≥ 18 inches) placed in the 95th percentile in the 2024 survey.
- Overall, the 2019 habitat project restored and increased cover and deep pool habitat preferred by trout. The trout populations responded with increased abundance, reproduction and size quality.