

Wisconsin Department of Natural Resources

2026 Stream Habitat Improvement Report

East Branch of the Eau Claire River Spring Road Upstream, Langlade County

Introduction and Objectives

The East Branch of the Eau Claire River is a class 1 trout stream in Langlade County that is home to naturally reproducing native brook trout (*Salvelinus fontinalis*). Sand, gravel, cobble and rock make up much of the stream substrate within the project area. The East Branch of the Eau Claire River originates from Summit Lake in west-central Langlade County. The East Branch of the Eau Claire River flows southernly through Langlade County where it eventually joins the West Branch of the Eau Claire River to form the Eau Claire River just west of the City of Antigo and south of state highway 64.

The East Branch of the Eau Claire River has historically been negatively impacted by dams, beaver dams, logging, log drives and agricultural practices. Impairments of the East Branch of the Eau Claire River include widening and shallowing of the stream channel causing water temperatures to increase, erosion of stream banks and sedimentation causing siltation of trout spawning areas. The stream is also void of large complex wood and rock habitat preferred by trout. Beaver control practices and beaver dam removals have been conducted and monitored to prevent further damage to the East Branch of the Eau Claire River.

This section of the East Branch of the Eau Claire River is higher in gradient than other parts of the stream. The stream is wide and shallow and benefited from the assisted narrowing and deepening of its natural channels. The objective was to follow the natural fluvial geomorphology of the stream and help restore it to its natural state. Point bar/island construction, channel shaping and installations of complex wood and rock habitats were added within the stream's natural banks to avoid any disturbance to nearby wetlands.

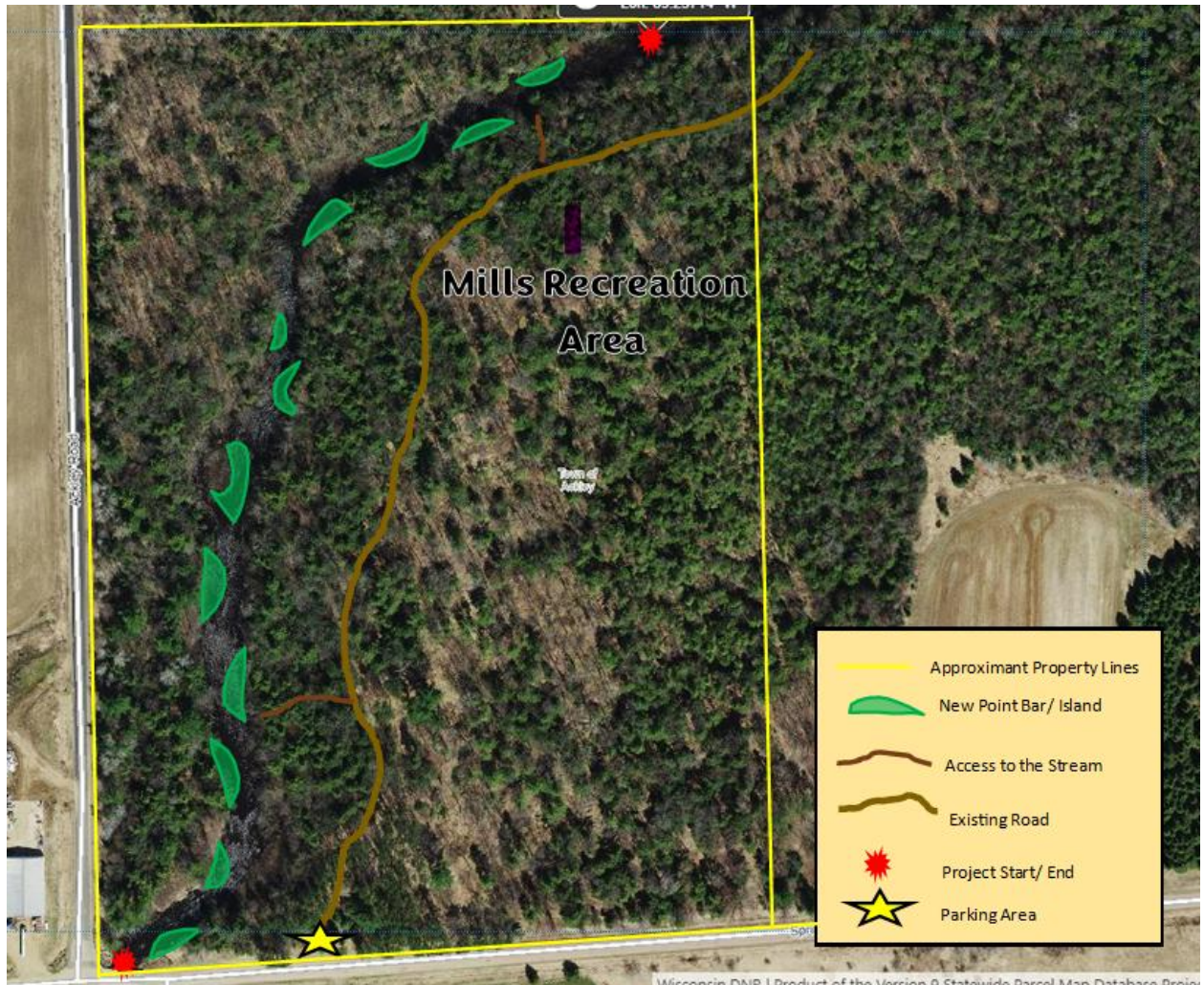
Watershed Information

- **Waterbody code:** 1442200
- **Trout stream miles:** 18.7
- **Number of Class 1 miles:** 12.66
- **Number of Class 2 miles:** 0.0
- **Number of Class 3 miles:** 6.04

- **Notable public access:** Public access is located on the downstream end of the project from a parking area off of Spring Road, just to the east of the Ackley and Spring Road intersection in the Town of Ackley.

Fishing Regulations

- **Category:** Green
- **Daily bag and size limit:** 5 trout in total of any length



Map showing project area, project components and access.

Habitat Method Descriptions

- **Channel Shaping**
 - a. Depth of the stream is increased from excavation
 - b. Spoils from excavation are used to create point bars and islands

- c. The point bars and islands narrow the stream concentrating flow, helping to maintain cold water temperatures
- **Large Wood**
 - a. Trees were taken out of the riparian corridor
 - b. Trees were at least 8 inches in diameter, many had root balls attached
 - c. Installed in stream as single or groups in random configurations
 - d. Trees anchored with earth and/or rock
- **Boulder Placement**
 - a. Installed as single or groups in random configurations
- **Vegetation Management**
 - a. Brushing (tag alder)
 - b. Point bars/island were mulched and seeded with a mixture of clover, wheat, oats
 - c. Tree plantings (to be completed at a later date)



Picture 1 Eleven points bars were added to the stream. They were mulched and seeded upon their completion.



Picture 2 and 3 Rocks, root wads and wood structures were added to the stream as habitat structures.



Picture 4 A plunge pool was excavated and rocks were arranged above it to keep the plunge pool flushed.

Table 1. Project information

Site Location	East Branch of the Eau Claire River Upstream of Spring Road (Langlade County Mills Recreation Area)
Project Date	July 2026
Project Length	1,550 feet
GPS (Start/Finish)	Start Location: 45.16437, -89.23774 End Location: 45.161016, -89.239921
Funding	Trout Stamp
Additional Funding	Funds for Summer Crew gifted by Trout Unlimited Chapters of Northeast WI
External Partners	Trout Unlimited National, Trout Unlimited Chapters of Northeast WI, Langlade County
Point Bars Added	11
Islands Added	1
Whole Trees Installed (Instream Habitat)	40 (donated by Langlade County)

Metric Descriptions

- **Length Frequency Distribution** describes trout size structure. It is the number of trout captured grouped by half-inch length intervals.
 - **Young of the Year (YOY)** are trout that are less than 4 inches in length.
 - **Adults** are trout that are at least 4 inches and greater in length.
- **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).

Survey Method

- All streams are sampled according to DNR wadeable streams monitoring protocols.
- Metrics used to describe trout populations include average length, CPUE and length frequency distribution.

Pre Evaluation

- Pre survey was done in 2021 (stream electrofishing)
 - 57 brook trout including four YOY
 - Total brook trout relative abundance sampled was 182 trout per mile
- Daily temperature log was evaluated in 2016
 - Comparable to other sections of the East Branch of the Eau Claire River pre-habitat projects. These other sections with habitat work completed have had successful brook trout responses post project.

Post Evaluation

- Post habitat trout surveys will be repeated in five years to evaluate the response of trout to the habitat improvement projects
- Expected trout population responses include:
 - Increased abundance of adult trout per mile
 - Increased size quality of trout

Summary

In an effort by the WI DNR Antigo to create better trout habitat on the East Branch of the Eau Claire River upstream of Spring Road, one new island and eleven point bars were created to narrow and deepen the existing waterway. Pools and runs were excavated. Pools were deepened to a maximum depth of 4.5 feet and runs were deepened to a maximum depth of 3.5 feet. No excavation was made to the existing rifles. Trees were taken from the property and added to the stream. Rock was brought in and found on the property/waterway were placed/moved accordingly and added into the waterway. These habitat components mimic naturally occurring habitat components and provide cover and prey refuge. Point bars were seeded with a mix of grasses to help hold sediment and allow native plants to move in and prosper. Increased trout population is expected with this large habitat project. A post project fish survey will be conducted in five years to be compared to the pre survey done in 2021. Adult trout numbers and individual size quality are expected to improve.

In addition to the stream habitat project, two new access points were added, allowing easier access for anglers and other recreational participants.

Special thanks to Trout Unlimited National who funded and completed a Hydrology and Hydraulic study on the project section of East Branch of the Eau Claire River. The study was completed as a condition of the general permit required for this

project in order to compile with floodplain ordinance. Without this study the trout stream habitat work would not have been able to be completed. Also, special thanks to Langlade County for their help and cooperation during the project.

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