WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Stream Habitat Improvement Report 2024-2026
Spring Creek, Lincoln County
Waterbody Code: 1483400

Introduction And Project Goals

Spring Creek is a class 1 trout stream in Lincoln County that is home to naturally reproducing native brook trout (*Salvilinus frontinalis*) and naturalized brown trout (*Salmo trutta).* It flows southernly from the outlet of Spring Lake, a spring pond and native brook trout water, in the town of Merrill before flowing into the Prairie River. The creek is an excellent trout stream in its own right, and it also provides critical spawning habitat, cold water refuge and additional cold-water input to the Prairie River, another very good trout stream that can become thermally warm for trout in its lower reaches during summer months.

Spring Creek has historically been negatively impacted by beaver dams, logging, agricultural practices, and inappropriately sized and elevated culverts. Impairments of Spring Creek include widening and shallowing of the stream channel, erosion of stream banks, and sedimentation resulting in siltation of trout spawning areas. The stream is also lacking large complex wood and rock habitat preferred by trout.

This project was 3,000 feet in length and included the following stream rehabilitation techniques: brushing, tree planting, channel shaping to deepen and narrow the stream channel resulting in the creation of point bars and islands, and the installation of complex wood and rock habitat. This project was conducted on the Prairie River Fishery Area. Goals of this project were: narrowing and increasing depth of the stream channel, increasing the amount of complex wood and rock habitat in the stream and suppressing tag alder growth while encouraging recruitment of mature timber (habitat) into the stream within the riparian area. This project increased resting and foraging habitat and improved spawning sites for adult trout.

Public access is located on the upstream end from a DNR access road off of Spring Lake Road and on the downstream end from the Prairie River at the end of Prairie Road.

WDNR Contact

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Regulations

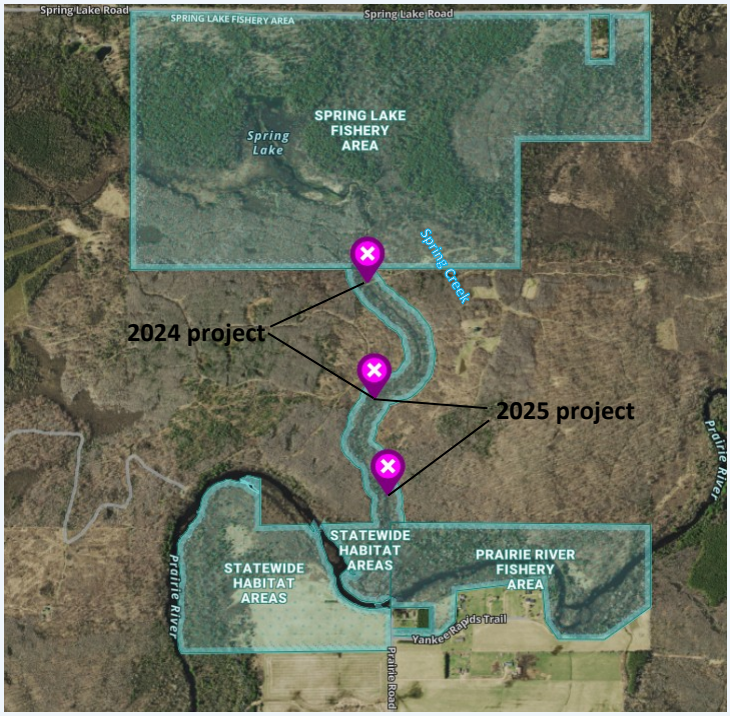
Category: **Red**
Daily Bag and Size Limit:
3 trout in total: brown and rainbow trout over 12", brook trout over 8"

Photo Credit: Wisconsin DNR

PROJECT INFORMATION

Site location	GPS Coordinates	Project Length	Funding	Project Cost	Cost Per Foot	Project Dates
Spring Creek Below DNR Access Road	Start Location: 45.25680 -89.61142 End Location: 45.24881 -89.61234	3,000 Feet	Trout Stamp	$35,023	$11.67	Started:2024 Completed: 2026

Boulders Installed (2-4 Foot Diameter)	Whole Trees (Instream Habitat)	Log Covers	Trees Planted	Additional Funding	Volunteer Work-days	Staff Hours
80	80	3	1,500 (2025) 1,440 (2026)	Funding of summer crew by: Trout Unlimited Chapters of Northeast WI	1 (Trout Unlimited Tree Planting)	1,080



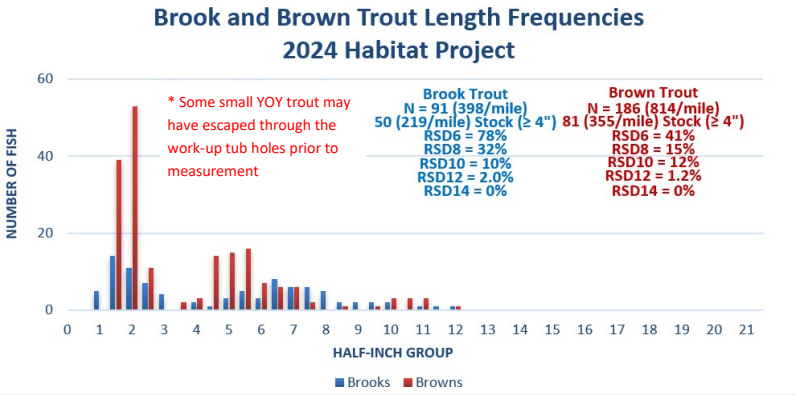
Habitat Method Descriptions

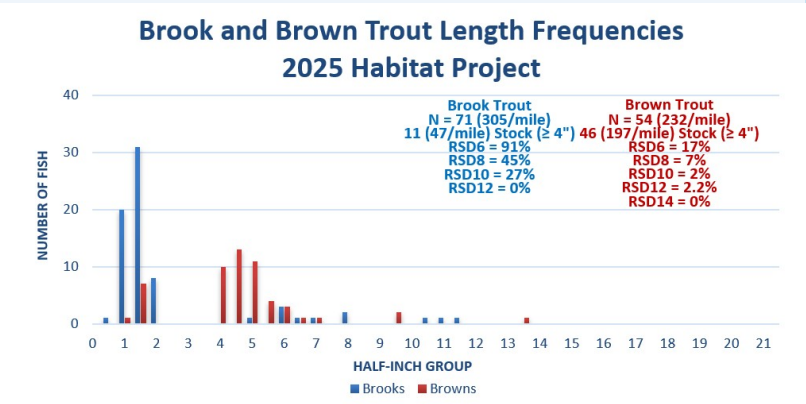
- Channel Shaping
  - Depth of the stream is increased from excavation
  - Spoils from excavation are used to create point bars and islands
  - The point bars and islands narrow the stream concentrating flow, helping to maintain cold water temperatures
- Large Wood
  - Trees were taken out of the riparian corridor
  - Trees were at least 8 inches in diameter, many had root balls attached
  - Installed in stream as single or groups in random configurations
  - Trees anchored with earth and/or rock
- Log Covers
  - Complex wood structures constructed from whole trees, large limbs, and brush
  - Placed on outside bends
  - Provide complex overhead cover
- Boulder Placement
  - Installed as single or groups in random configurations
- Vegetation Management
  - Brushing (tag alder)
  - Tree plantings
    - Spring of 2025
    - Spring of 2026

Summary

- New Islands and Point Bars Created
- Excavated Pools and Runs
  - Pools deepened to 2.5-3.5 feet
  - Runs deepened to 2-3 feet
  - Riffles no excavation
- Large Wood and Rock Added

Photo Credit: Wisconsin DNR





Pre and Post Evaluation

- This stream was sampled according to WDNR wadeable streams monitoring protocols
- Two new sampling stations were created to establish pre-restoration trout fishery assessments
- Each respective year a portion of the entire section of stream being worked on was sampled
  - 2024 - 1,206 feet
  - 2025 - 1,230 feet
- 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

Photo Credit: Wisconsin DNR

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.
- **Relative stock density (RSD)** is the percentage of trout that meet a minimum length (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).