

HARRY AND LAURA NOHR CHAPTER OF TROUT UNLIMITED

BLUE RIVER HABITAT IMPROVEMENT PROJECT 2021 / 2022



Report Prepared by the
Project Committee
Harry and Laura Nohr Chapter of Trout Unlimited

Sponsorship and Partners

The Harry and Laura Nohr Chapter of Trout Unlimited are proud to serve as the sponsor for this project. The chapter does not have the financial resources to undertake projects of this magnitude alone; so, it is necessary to collaborate with other organizations for volunteer labor and financial assistance. The Nohr chapter, as always after any major project, is indebted and grateful for the financial and physical efforts it has received through the year. We also look forward to continuing these partnerships in our ongoing cold-water habitat improvement efforts.

The partners for the 2021-2022 Blue River and Six Mile Habitat Improvement Project are as follows:

- Natural Resources Conservation Service
- Wisconsin Department of Natural Resources
- Terry Geurkinkl
- Jim Sanger
- Elliot Donnelley Chapter TU
- Madison Fishing Expo
- Badger Fly Fishers
- Friends of Wisconsin TU
- Lee Wulff Chapter TU
- Southern Wisconsin TU
- Tom France
- TU DARE
- Dave Roh Excavating



One of the backwater refuges that were installed during the project. These are important habitat for amphibians, reptiles, and forage fish.

Background

The Harry and Laura Nohr Chapter of Trout Unlimited undertake habitat improvement projects as a part of its mission “to conserve, protect, and enhance the cold-water resources of Southwest Wisconsin”. In 2003 the Harry and Laura Nohr Chapter approved a plan to improve the habitat of the Blue River and its tributaries.



The project sites

Because of the importance of the Blue River and its tributaries as cold-water resources in a matrix of lands with unusually great potential for conservation, the Harry and Laura Nohr Chapter have focused on habitat restoration along these streams. This report addresses the work on a short section of Six Mile (approximately 600 ft.) immediately below our 2020 project to its confluence at the Blue River and a much longer (approximately 7,500 ft.) section of the Blue River. These stream sections are located below and along Co. Rd. Q in Grant Co. Both stream sections have a DNR easement. Access to both streams is from the bridge on Co. Q.

Stream Conditions before the Project



Six Mile looking downstream from Co. Q bridge. It was choked with Boxelder's and had high vertical eroding banks.





Photos of Blue River with brushing and Boxelder removal completed on one side of the stream.





Typical of banks on both sides of the stream through entire project. Upper photo has one side shaped.





Examples of large sections of vertical banks sloughing off.





Bank shaping has been done on one side in lower photo.





Banks averaged ten feet high, but some were over fifteen feet high.



The Project

This is by far the largest project we've completed to date. Its location is immediately downstream of the 2020 Six Mile work. Both projects were previously delayed from starting because of two consecutive years of record precipitation in 2018 and 2019. Because of the relatively short length of the Six Mile reach (approximately 600 ft.) both it and the 7500 ft. section of Blue River were considered one project.

The upper half of the project site was heavily canopied with Boxelders along with scattered Walnut trees. The lower section was mostly open. The entire length was deeply entrenched with very high banks on both sides of the stream. Banks in both the wooded and open sites were collapsing into the stream. There were large log jams in a couple of spots that kicked the water into these raw vertical banks during high water events causing a large amount of erosion.



The work started in December 2020 with brushing and Boxelder removal on Six Mile, then continued down the east side of Blue River. Work concluded when the snow and cold became too great. It resumed in the spring of 2021. The upper half of the project was finished by September. Work then stopped until the end of November to allow row crops that bordered the lower half of the project section to be harvested. The work then resumed and like in 2021 stopped when the weather became too much. We started again in the spring of 2022 and completed the project in August.

Stream and Riparian Improvement Work

We originally planned to complete this project in 2019 but record wet weather in 2018 and 2019 delayed the project and prevented us from starting the work until Dec. of 2020. The 2021-2022 Blue River project improved stream habitat along approximately 8,100 feet of the Blue River and Six Mile. Eroding, vertical stream banks were tapered at a ratio of six or seven to one where possible, and tens of thousands of cubic yards of soil were removed from the immediate flood plain. Over 1,800 tons of soil were estimated to have been prevented from eroding into the stream by doing this work. Soil testing done before the work started has also shown that over 1,800 pounds of phosphorous was prevented from entering the water.

Rip-rap medium was used to armor stream banks and improve habitat. Riffle-pool-run topography and stream sinuosity were improved. Structures added to improve habitat included log deflectors, backwater hooks, rock deflectors, vortex weirs, and root wads. The backwater refuges that were created or enhanced will benefit reptiles, amphibians, and forage fish.



In shaping the banks, the tens of thousands of yards of soil were removed to improve the connectivity of the stream to the flood plain. Each of the piles above are approximately 18 - 20 yards. There were over 800 piles thin spread in crop fields out of the flood plain on one side of the stream in the lower half of the project alone.



Mulching after the site was armored, shaped, prepped and seeded.





Before and after sequence after armoring and shaping with vegetation establishing.





Before and After





Six Mile. Top picture - site was thick with brush and boxelders and steep eroding banks.
Bottom picture – After the banks were armored and tapered and a weir installed.





Before and after on Blue River





Before and after, this was the highest bank in the project at about 20 feet.





Before and After





Conclusion

The Blue River is among the most popular and significant of the many beautiful trout streams of Southwestern Wisconsin. Generations of wise landowners have preserved the remarkable landscape of the area. In the present day, strong commitment of landowners to conservation ensures that the picturesque geology and diverse plant communities of the Blue River will persist into the future. As a result, the Blue River and its tributaries are a remarkable cold-water resource. There are enough miles of trout water of sufficient flow to accommodate many anglers. The streams offer diverse management practices. Some reaches provide the opportunity to catch the trout of a lifetime under trophy-preserving catch-release regulations. Other reaches offer catch and keep regulations that allow sustainable harvest. The 2021-2022 Blue River project has improved habitat and angling opportunities as well as opportunities for enjoying the native plants and animals of Wisconsin. The Harry and Laura Nohr Chapter of Trout Unlimited are proud to have sponsored this project and are deeply grateful to our many partners listed in this report. A special thanks to Joe Schmelz, past Grant County District Conservationist, and Andy Walsh, current Grant, and Iowa County District Conservationist. Also, DNR fisheries biologist Bradd Sims for all their help in facilitating this project. We are also thankful to the landowner Norman Zadrzil for his support of this project. As with every stream conservation program, partnerships among landowners, businesses, anglers, county, state and federal governments, and the state and national TU organizations are essential for the success of our stream habitat improvement projects. We are grateful for all their support.