

**HARRY AND LAURA NOHR CHAPTER OF
TROUT UNLIMITED
SIX MILE BRANCH
HABITAT IMPROVEMENT PROJECT
2015**



Harry & Laura Nohr Chapter of Trout Unlimited Six Mile Branch Habitat Improvement Project 2015 Project Summary

Background

The Nohr Chapter of Trout Unlimited annually undertakes a stream habitat improvement project as an essential part of our mission “to conserve, protect, and enhance the cold water streams of Southwestern Wisconsin.” In the winter of 2013 a representative of the chapter project committee met with two NRCS representatives, the contractor, and the landowner to walk the proposed project site. Together we discussed the project and drafted a preliminary design for the stream. The plan was to complete this project during the summer of 2014. Due to the WDNR restructuring of public access easements, the final easements and permits were not obtained in time for us to complete the project that year. So we rescheduled for the summer of 2015. With the easement and permits finally in place the project was able to be completed in 2015. This 2015 project comprised approximately 4500 ft. of stream work on the Six Mile Branch in Grant County. The landowner was someone we have worked with on past projects. His cooperation was an important part of our completion of another successful project. We are very appreciative. As in all of our stream habitat improvement projects we considered the entire riparian as a whole. In our efforts to restore trout and forage fish habitat we did not overlook the other critters of the riparian. We used various techniques that would also be beneficial to reptiles and amphibians.

Sponsorship and partners

The Nohr Chapter’s role in these projects is to serve as a project sponsor and the project leader. Because the chapter does not have the physical or financial resources to effectively undertake projects of this scale alone, it is necessary to reach out to other organizations for volunteer labor and financial assistance. We are indebted and grateful for the financial and physical support we have received from our partners over the last several years. We look forward to continuing these partnerships in our ongoing habitat improvement efforts. The partners for the 2015 Six Mile project include:

Natural Resources Conservation Service
Wisconsin Department of Natural Resources
Trout Unlimited Driftless Area Restoration Effort
National TU Embrace-A-Stream

Wisconsin State Council TU – Friends of WI Trout
Elliott Donnelley Chapter TU
Southern Chapter TU
Lee Wulff Chapter TU
Madison Fishing Expo
Badger Fly Fishers
Dave Roh Excavating



One equipment crossing and several cattle crossings were installed as part of this project



Our partnership with the NRCS and the Wisconsin DNR and the help we have received from our area fisheries manager, Gene VanDyck, and NRCS engineers, Mike Dreischmeier and Joe Schmelz, has been very important in the facilitation and successful completion of this and several past projects. Stream restoration work is labor intensive and expensive. The partners listed above provided the financial support and volunteer labor necessary to move the project to completion.



Photo is from before additional easement was acquired. Project length is from X to X

Stream and Riparian Improvement Work

The foremost objective of the Nohr Chapter is to complete projects that reflect and exceed the best known practices in habitat improvement work. We endeavor to produce outcomes that reflect the highest standards of technical expertise and aesthetic quality. The techniques used to achieve these outcomes may vary on different stream segments.

The 2015 Habitat Improvement project was completed on a 4500-foot section of stream on Six Mile Branch in Grant County. This reach of

stream runs through a pasture for the landowner's beef cows. Much of this section of stream was comprised of raw vertical banks and was wide, shallow, and very silted. Large sections of these eroded, unstable banks continually sheared off, contributing to heavy sediment loads in the stream.



Wide shallow silty area with eroding outside bank

Work on the project started in July and was finished by the end of September. The initial work consisted of installing temporary culverts across a spring and a couple of deep gullies that were caused by hillside runoff. This was needed to allow equipment and truck access to the site. A machine crossing also had to be installed to allow the contractor to access different areas of the site. As the work progressed the culverts were removed and the areas were shaped and seeded. One of the main goals of this project was to reshape and stabilize eroding banks to help reconnect the stream to the flood plain. This allows the stream to run narrower and deeper exposing gravel and cobble areas and allowing them to scour deeper holes and runs while decreasing the sediment load in the stream. Another goal was to protect and enhance the springs and seeps that enter the stream throughout the site. In a couple of places where these springs entered the stream and were accessible to the cattle we reshaped and armored the banks.



Same site with the bank shaped, armored and pinched in. There is a weir above this just outside of the picture which will help keep this segment scoured and deeper

The restoration work was quite extensive. It required doing thousands of feet of bank stabilization. Approximately 5,000 yards of bank spoil were hauled out of the immediate flood plain. Half-weirs were installed to help scour holes and runs. Some boulder retards were added as well as the strategic placement of log deflectors which will create overhead cover for trout and habitat for amphibians and smaller forage fish as well as basking areas for reptiles. Rock deflectors as well as the log deflectors strategically placed also helped to create some sinuosity in straight channeled areas. Several cattle crossings were also installed.

Since this area was an actively grazed pasture it was reseeded with a pasture mix of cool season grasses. To keep the cattle away and to protect all of the area that we shaped and reseeded the entire site had to be fenced with electric fencing. This was a tall job since both sides of the stream and some of the adjacent woodlands had to be properly fenced to ensure protection of the vegetation we were trying to get established.



Before and after bank shaping with a backwater area created





In addition to the shaping and armoring, a weir was installed in the run above this hole





This channel was wide and full of silt. It was pinched in with log and rock deflectors, which narrowed and created meanders in the stream. This should create better fish habitat and allow the channel to stay deeper with less silt



A large spring enters the stream at the lower end of the project. A narrow strip of land separated the stream oxbow from the spring. This narrow strip had become very degraded. By the time the project started the stream had cut completely through it leaving the old oxbo mostly dry. We tapered and armored the banks on the new stream channel and also where the spring enters the stream. We also installed a cattle crossing and left the old oxbow as a backwater.



The picture above, looking upstream, shows the lower side of the oxbow with the spring below it. The stream had breached this area by the time the project started. They used to join about 50 feet below this section. The pictures on the next page were taken above this area looking downstream. In the top picture the spring enters the stream below the corner post visible in the right of the photo. The bottom picture shows the finished section with the banks tapered and a cattle crossing visible in the right side of the photo. The old stream channel now makes a nice backwater area.



Summary

The 2015 Six Mile project showcases one more example of successful stream habitat improvement work in Southwest Wisconsin. The improvements to this segment as well as the previous work done on Blue River and Big Spring will benefit the entire Blue River watershed by reducing the sediment load into the system. Other species in the riparian area will also benefit from the work that has been done.

The Nohr Chapter is proud to have sponsored this project and is deeply indebted to the partners who have volunteered services and funds to this restoration effort. Stream work requires significant team effort; we could not have done it without the help of our partners. Thanks to all.

