

# BLUE RIVER HABITAT IMPROVEMENT PROJECT 2005



# Harry & Laura Nohr Chapter of Trout Unlimited Blue River Habitat Improvement Project – 2005 Project Evaluation

## **Background**

The Nohr Chapter of Trout Unlimited annually undertakes a stream habitat improvement project as an essential part of its mission “to conserve, protect, and enhance the cold water streams of Southwestern Wisconsin.” The efforts to enhance a segment of Blue River started in the early fall of 2003 with the project committee’s proposal of a consecutive three-year commitment to a project on Blue River. Later that fall with board approval of the proposed project, design work was started for the 2004 project. The first project was successfully completed in late August of 2004.

Planning began for the 2005 segment soon thereafter. The stream design was completed by Roger Widner in the late fall of 2004. With board approval for the proposed 2005 project, fund raising and the permitting process began.

## **Sponsorship and partners**

The Nohr Chapter’s role in this project is to serve as the project sponsor or project leader. Because the chapter does not have the physical or financial resources to effectively undertake project activities it is necessary to reach out to other organizations for volunteer labor and financial assistance; that is a partnership is required to achieve desired quality outcomes. Exemplary technical and ecological project outcomes are of top priority. Exemplary outcomes are the chapter’s motivational push and they provide the cohesiveness that binds our partnership efforts. The partners for the Blue River 2005 project are:

- The Wayne Zoha Family
- The Milo Zoha Family
- The Blackhawk Chapter TU
- The Elliott Donnelley Chapter TU
- The Oak Brook Chapter TU
- The Lee Wulff Chapter TU
- The Southern Chapter TU
- The Gary Borger Chapter TU
- National TU Embrace-A-Stream
- Wisconsin State Council TU
- Wisconsin DNR
- Madison Fishing Expo
- Badger Fly Fishers
- Iowa County Land Conservation Department
- Iowa County Natural Resources Conservation Service
- Joe Fitzsimmons
- Alliant Energy

Our partnership with the DNR has significantly eased the permitting process. Stream restoration work is labor intense and expensive. The partners listed above provided over 270 hours of volunteer labor and/or financial support for contracted machine work and required materials, and moral support necessary to move the project to completion.



## Project Activities

The stream segment in the 2005 project did not require any tree or brush removal, as the entire length of stream is intensively grazed pasture. What was needed were 60 lunker structures. The necessary materials were purchased and two workdays were scheduled because of the large number of structures needed. But with a large turnout of almost 50 volunteers from seven different TU chapters and several individuals unaffiliated with any TU chapter we were able to construct all the structures needed in one 4-hour workday. Building lunkers is hard and heavy work. The generators and power tools the Nohr Chapter previously purchased helped speed the process as did the skilled help and equipment of the Blackhawk Chapter.



## 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 stream 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 targeted stream segment of this project begins where the 2004 project concluded (at the border of the Zoha and Wolenc properties) and continues up-stream ½ -mile to the Blue River Road bridge and ends approximately ¼-mile east of the Blue River Road bridge. The Wisconsin DNR holds a public fishing easement on this segment. According to the Wisconsin DNR fisheries biologist, Gene Van Dyck, the point at where the project was completed is believed to be the beginning of sustainable trout habitat on the Blue River. Temperature information collected by volunteers from the Nohr Chapter tends to support this belief. For the past two years we have collected temperature data from a series of temperature loggers installed along many miles of Blue River, including immediately above and below the conclusion of this year's project. This information is available on our website at [www.nohrtu.org](http://www.nohrtu.org).

One of the goals of this year's project was to lessen the detrimental impact that cattle can have on a stream when they have unrestricted access to the stream. This is the case in this entire stream segment. The biggest problem is bank degradation. Cattle can cause large erosion problems where they cross and have access to stream banks. High water events then further erode the damaged areas.

To lessen the negative impact of cattle on the stream we installed numerous cattle crossings and two equipment crossings; five below the bridge and six above. Incised banks and other areas subject to erosion were armored to the toe with riprap. Many of these areas were back-filled with additional rock that was then covered with soil, seeded, and mulched.









Eroded areas of the stream that had become wide and shallow had the banks tapered and were pinched in to increase channel depth and speed. Lunker structures were incorporated into many of these sights. Diverters and vortex weirs were created to inhibit siltation in these areas. Following the small channel that attempted to flow through this thick vegetation narrowed several wide flat areas that were choked with macrophytes. This brought forth the natural meander pattern that existed in these wide macrophyte filled sections. They now run faster and deeper exposing cobble and riffles that we hope will become better spawning habitat. Vortex weirs were also created above existing holes to help scour and deepen them. The lunkers and deep holes will provide overhead cover, restore the riffle-pool-run sequence, and enhance the opportunity for natural reproduction. The riprapping, strategically redirecting the flow and bank tapering will reduce soil erosion to a minimum.



## Conclusion

The Blue is one of the most significant and appealing streams of Southwest Wisconsin. The scenery is spectacular and the stream itself is large enough to attract and accommodate a considerable number of anglers. It is one of those streams that fisherman will travel a couple hundred miles to fish. This project and future projects will enhance the fishery and increase its appeal. The Nohr Chapter is proud to have sponsored this project, and is deeply indebted to our partners who have donated volunteer services and funds to that effort. We could not have done it without that help.

