



Clean Michigan Initiative Clean Water Fund Grant

Tracking code 2002-0267

City of Marquette

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Whetstone Brook Restoration Project

June 6, 2004 through May 31, 2006

For over one hundred and thirty years the Whetstone Brook - a Type I trout Stream - had been confined to a culvert under the south railroad yards adjacent to the City of Marquette downtown business district. The City of Marquette decided to remove this 400-foot long concrete culvert that confines the Whetstone Brook and restore this section of highly visible trout stream to its original condition.

Along with this restoration, the project established permanent vegetative riparian buffers on both sides of the stream. These buffers will revitalize a healthy stream ecosystem that will filter and clean area storm water runoff before entering the brook in addition to providing better habitat for plants, animals and fish. The goal of this project was to reintroduce a highly visible 400' section of the mouth of a trout stream and its riparian habitat back into nature where cold water fisheries reproduction will be enhanced and the stream can be cleaner and accessible to the public.



Grant Amount: \$ 180,000

Match Funds: \$ 72,000

Total Amount: \$ 252,000

Best Management Practices:

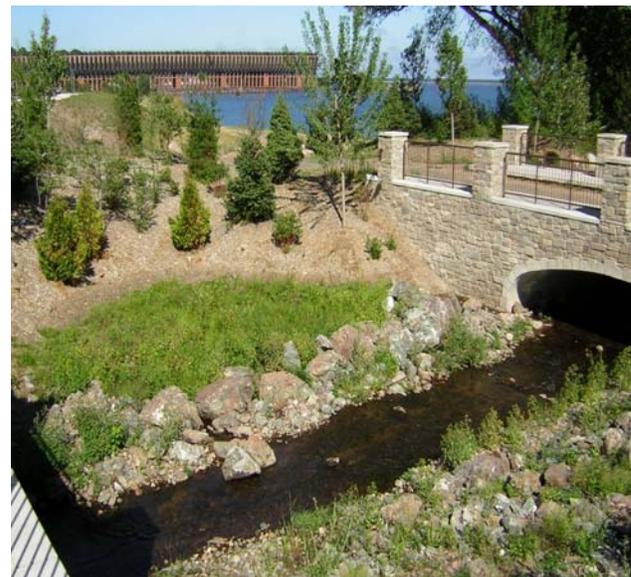
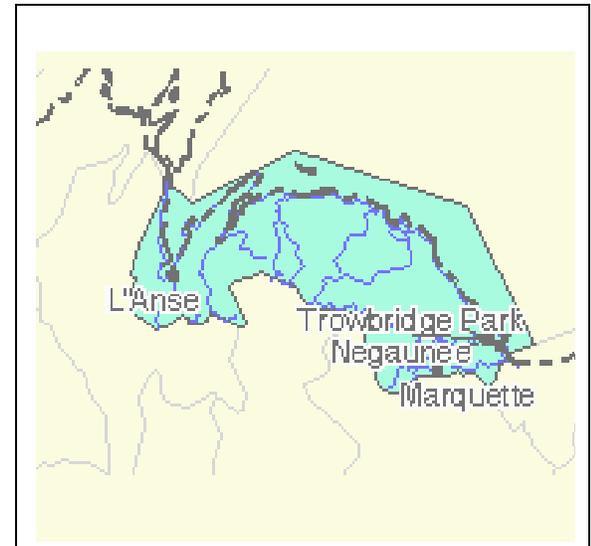
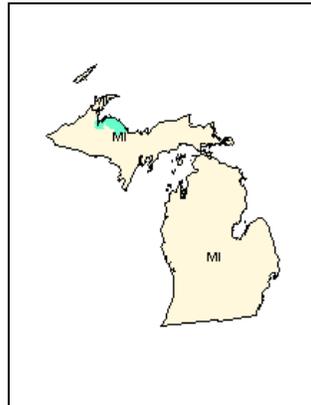
- 460 Linear Feet of Stream Bank Stabilization using Riprap
- 230 Linear Feet of Stream Bed Cobble
- 1.84 Acres of Forest Riparian Buffer Strip
- 0.11 Acres of Bio-Retention Areas
- Two Storm Water Treatment units Capable of treating 12 CFS flow.

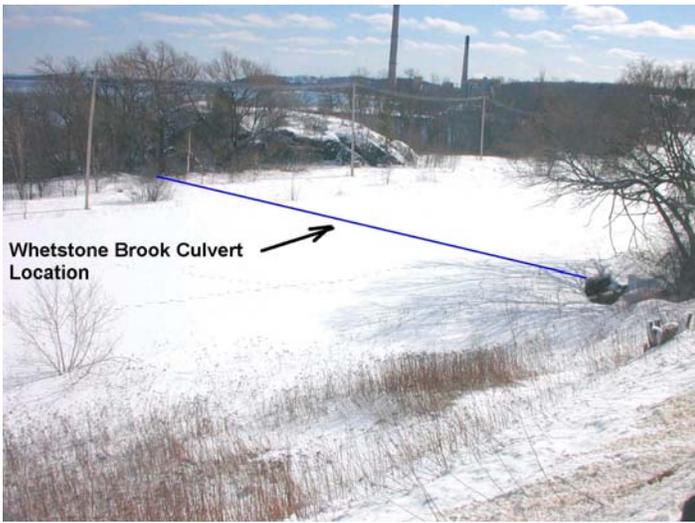
Annual Load Reduction:

- 14.08 Tons of Sediment per Year

Partners involved:

- Michigan Department of Environmental Quality
- Central Lake Superior Watershed Partnership
- United States Department of Agriculture Forest Service





For over 130 years a failing mortared sandstone culvert confined the Whetstone under a railroad siding. The crumbling culvert created sink holes that transferred soil and cinders into the flow of water.



The creek is now open. It flows under two new stone arch bridges before it cascades over a small waterfall near Gaines Rock. The riparian areas are heavily vegetated with native plantings. Two small constructed wetland areas adjacent to the newly opened creek help moderate high flows and aid water quality.



The north stream bank here just east of the culvert removal area used to be almost vertical and in a constant state of erosion.



The project reshaped the bank into a gentle slope. The bank was seeded, mulched with wood chips (can be seen in upper left) and planted with native trees and shrubs. Several invasive species were removed before planting.