



Conservation Resource Alliance

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Maple River/Robinson Road Crossing Erosion Projects

May 2005 through November 2007

In 2000 a regional Needs Assessment identified 3 eroding stream bank sites and the crossing at Robinson Road as the biggest negative impacts to water quality and fish habitat in the Maple River. The river is a high quality cold-water stream popular for trout and other fishing. The existing culverts were failing to the extent that they were blocking fish passage, causing excessive sediment erosion and flooding, and artificially warming the water.

The system of 5 culverts were removed and replaced with dual arch culverts, allowing fish passage and unrestricted flow, helping manage runoff away from the river, and providing benefits to many species as well as local people. Further stabilization efforts were implemented on two sites (one on the East Branch and the other on the West Branch). Bioengineering methods were used in the streambank stabilization projects further reducing harmful sediments from entering the Maple River. Future projects in the area will build on the experience gained by partners in this project.

Project Cost: \$ 194,256*

- **Contributors:**
- US Fish & Wildlife Service
- Emmet County Road Commission
- Emmet County Revenue Sharing Board
- Baiardi Family Foundation
- The Frey Foundation
- Petoskey-Harbor Springs Area Community Foundation
- USDA Conservation Innovation Grant
- CRA's River Care Fund

- Plus in-kind contributions over \$5,000

Location

Sections 3 & 34 of
Pleasantview and Center
Twps., Emmet Co., MI
N 45.550681; W



Best Management Practices:

- removal of existing culverts
- road and ditch runoff control
- pavement and curbing
- revegetation
- stream channel enhancement
- streambank stabilization

Project Benefits:

- Estimated 14.8 tons/yr reduction in sand loading to the river, benefiting many aquatic and terrestrial species
- Enhanced unrestricted passage for migratory fish, and access to ~8 upstream miles and ~12 downstream miles
- Improved safety and appearance
- Reduced flooding potential and

Partners involved:

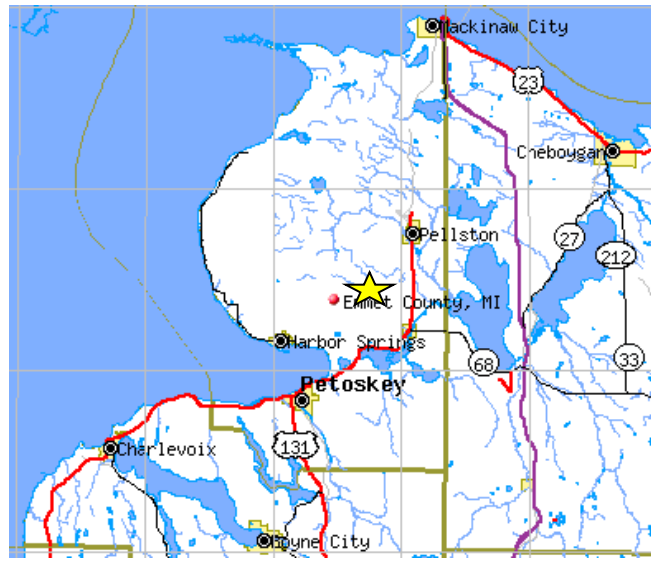
Conservation Resource Alliance, Emmet County Road Commission, Northwest Design Group, US Fish & Wildlife Service, Michigan Department of Environmental Quality, Michigan DNR, Miller Van Winkle Chapter Trout Unlimited, Carp and Maple River Task Force Members



Failing culverts prior



to construction



Temporary stream diversion for culvert removal and replacement during construction



**New dual culverts with poly coating placed in alignment with river and finished construction
November 2007**



***Maple River Erosion Sites
Constructed access to river (left), road diversion to keep vehicles off stream bank edge (right)***



Biologs, fieldstone rip rap, and tree revetments used to stabilize the stream bank

Other Results



Before



After

Site 3 from the 2000 inventory was found to have stabilization efforts installed and keeping harmful sediments out of the river



Before



After

Camp Rd. (Site E-23) was ranked as severe in the 2000 road/stream crossing report. The site is now stabilized, revegetated with native grasses and shrubs.