

**Title: Tobacco River Restoration Project**

Michigan 303(d) Number: The Tobacco River is not on Michigan's 303(d) list.

GRTS Number: 995014950 - Project 33

Opening Paragraph: Sedimentation problems due to livestock access and poorly maintained road/stream crossings in the rural Tobacco River watershed degraded instream habitat and macroinvertebrate populations.

Problem: The Tobacco River is a tributary to the Tittabawassee River in Clare and Gladwin Counties in Michigan's Lower Peninsula. Much of the watershed is rural, and the stream channel suffers sedimentation problems due to uncontrolled livestock access and poorly maintained road/stream crossings. Excessive sedimentation negatively impacted instream habitat and the resident macroinvertebrate populations.

Project Highlights: Four sedimentation control projects were constructed in the same general vicinity on the Tobacco River by the Gladwin Conservation District and the Sanilac Conservation District; cattle exclusion fencing on the OK Farms and two road/stream crossing stabilizations, all in 1998, and another cattle exclusion project in 2002.

Results: Four sedimentation control projects were funded in the same general vicinity on the Tobacco River; cattle exclusion fencing on the OK Farms and two road/stream crossing stabilizations, all in 1998, and another cattle exclusion project in 2002. Biological monitoring conducted before (1994) and after (2002) these BMPs were installed confirmed their effectiveness (Table 1 and Figures 1 and 2). Instream habitat features related to bank erosion and sedimentation improved substantially after these BMPs were installed, and the improved habitat was reflected in the biological data; the total number of macroinvertebrate taxa and the number of sensitive macroinvertebrate taxa (mayflies, caddisflies and stoneflies) doubled.

Partners and Funding: In 1995 MDEQ provided \$143,505 in Section 319 funds to the Gladwin Conservation District for the Tobacco River restoration. In 2000 MDEQ provided \$462,926 in Clean Michigan Initiative-NPS funds to the Sanilac Conservation District for the Saginaw Bay Watershed Livestock Exclusion restoration project. One small component of this project (\$2,360) funded the installation of 1,450 feet of fencing on the Tobacco River. Pre- and post-BMP monitoring was also supported with Section 319 funds.

Photos: None

Data:

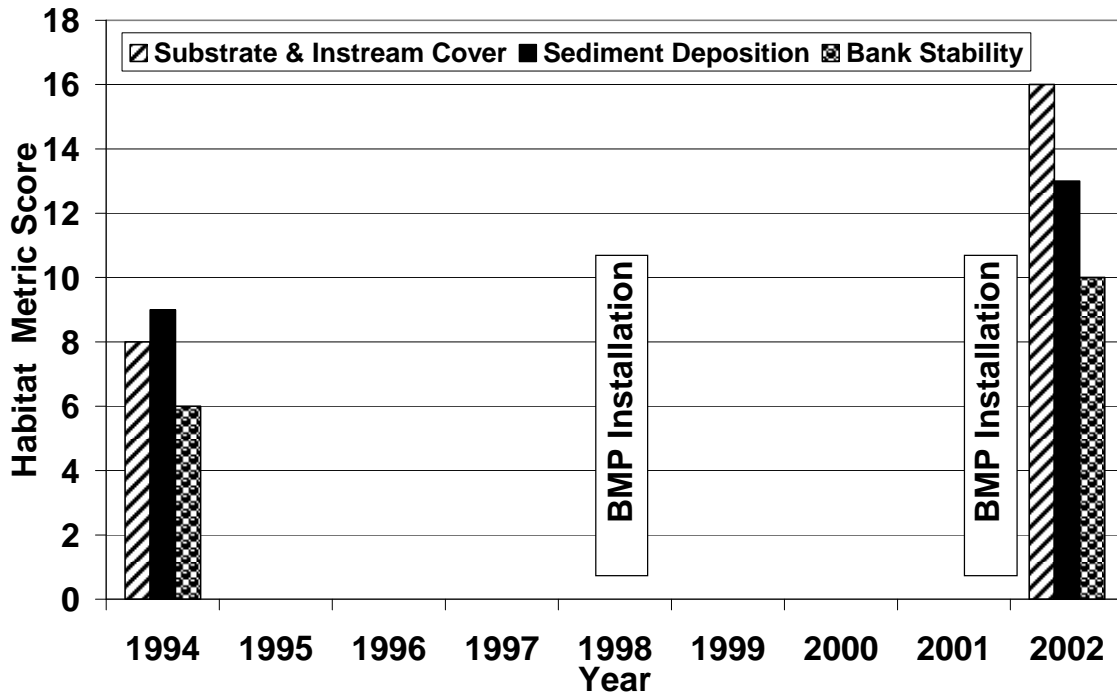
**Table 1. Biological and Habitat Data Downstream of the Tobacco River BMPs, Before and After Installation**

Year	Macroinvertebrate Taxa	EPT Taxa*	Available Cover**	Sediment Deposition**	Bank Stability**	Instream Habitat Classification
1994	18	7	8	9	6	Acceptable
2002	33	14	16	13	10	Excellent

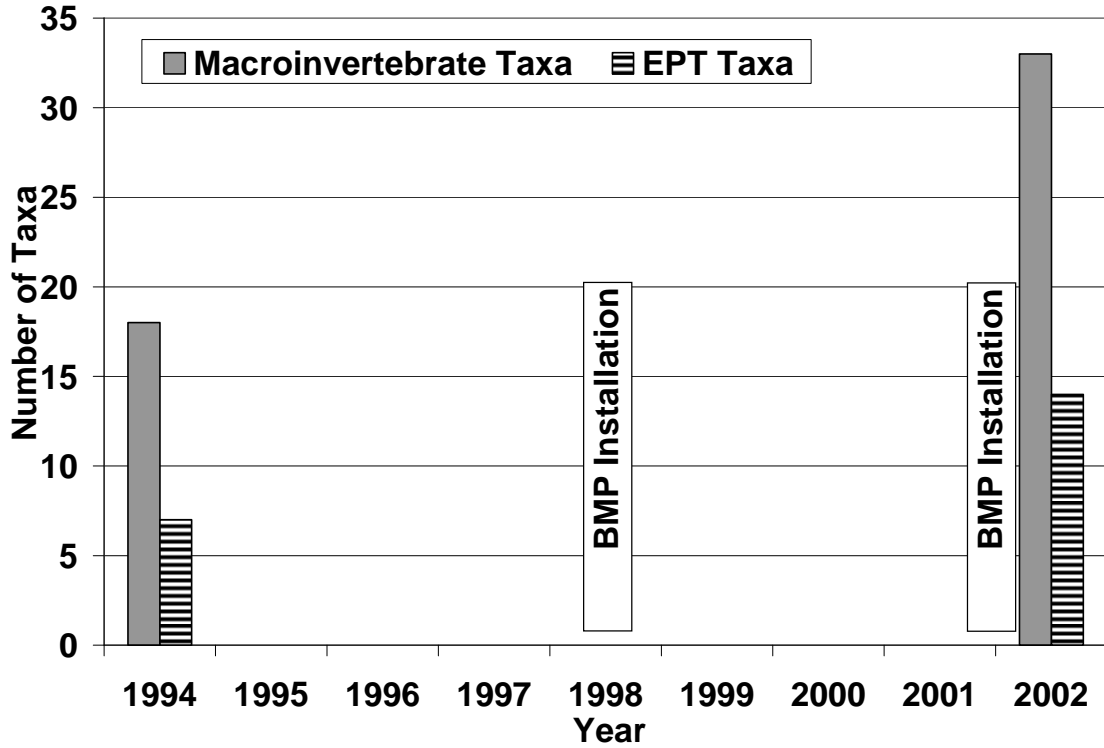
\* EPT = mayflies, caddisflies and stoneflies

\*\* Higher score = better habitat

**Figure 1. Habitat Data from Tobacco River, Before and After BMP Installation.**



**Figure 2. Macroinvertebrate Data from Tobacco River Before and After BMP Installation.**



Contact Information: Thad Cleary, MDEQ-Water Bureau; 517-375-4172; clearytj@michigan.gov