

CMI Project Report  
Kalamazoo River Watershed Critical Erosion Sites Mitigation Project

Site #1 –Final Report  
Section 7 of Convis Township, Calhoun County

This site was a high outside bank of a sharp bend in the Battle Creek River and is susceptible to high energy drag forces at stream forming flow levels that is continually undercutting the bank. The land directly adjacent to the riverbank is actively used, productive, tillable cropland. The landowner is a full time farmer that desires to stabilize and restore the bank to keep from losing any more of the bank that would cause the loss of trees and the buffer strip along the edge of his crop fields. Left unchecked, the bank would continue to erode, causing the loss of land including the loss of valuable cropland. Site is about 300 ft long and 20 ft high.

With the assistance of DEQ engineers it was determined that a solution employing a “live crib wall” would provide the hard revetment needed to stabilize the base of the bank and provide a bioengineering solution to stabilize the entire embankment.

Actual Project Costs:

Engineering, BMP implementation	\$21,040.00
Local Match (time, supplies)	<u>\$ 1,410.00</u>
Total Project Cost	\$22,450.00

“Before” pic showing undercutting and erosion:



"During" pic illustrating crib walls and live cutting placement:



"After" pic showing rock rip rap, crib walls, and vegetation:



Calhoun Conservation District applied for permit in May of 2003 to rebuild the eroded riverbank and stabilize the bank with bioengineering and rock crib walls consisting of rock and wood posts. An operation and maintenance agreement with landowner was signed in May of 2003. Contractor was chosen during July, 2003 through a bid process. Permit was granted on August 18, 2003 and work began immediately. Work was completed during September, 2003. Low water levels were beneficial to this project, making entire project quicker and easier. No significant problems or delays were encountered.