



Clean Michigan Initiative Nonpoint Source Grant



Muskegon Conservation District
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Muskegon River and AOC Watershed

August 15th 2001 - June 30th 2004

Muskegon Lake is a 4,150 acre drowned river mouth lake north of the City of Muskegon that discharges to Lake Michigan. The Muskegon River watershed encompasses 2,566 square miles, of which 33.4% is agriculture, 9.6% is urban, 22% is forested, 14% are wetlands, and 21% is considered other. Muskegon Lake and River are high quality fishing waters, but are being impacted by urban storm water runoff, agricultural runoff, erosion, and sedimentation. Logging, the clearing of land for agriculture, development, and the location of hydro dams on the river have aggravated the impact of sedimentation on the waterways. Boating, fishing, urban runoff, road-stream crossings and residential encroachments all deliver sediment to the stream, which alters channel morphology and increases bank erosion. The goal of this project was to reduce sediment, nutrient and storm water pollution into the Muskegon River and Muskegon Lake by stabilizing eroding banks and installing vegetative buffers along the water's edge.



Grant Amount: \$ 198,801
Match Funds: \$ 86,648

Total Amount: \$ 285,449

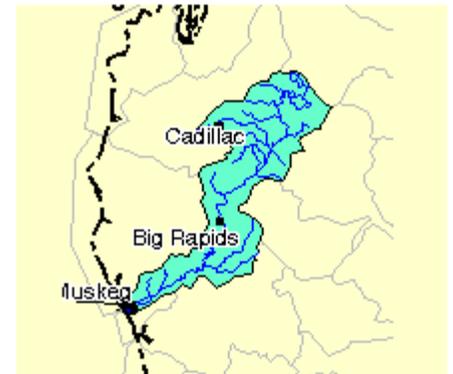
Best Management Practices:

- 4 Stream bank sites stabilized
- 600 linear feet of Slope/Shoreline Stabilization
- 2,020 linear feet of Streambank stabilization



Annual Load Reductions:

- 463 tons of sediment
- 380 lbs. of phosphorus
- 382 lbs. of nitrogen



Partners involved:

- Muskegon Conservation District
- Timberland RC&D
- City of Big Rapids
- USDA—Natural Resource Conservation Service
- County of Muskegon
- Mecosta Co. Comm. Foundation
- Zonta Club of Big Rapids
- Mecosta Conservation District
- Newaygo County Parks
- Muskegon Lake Public Advisory Council

I&E Activities: (concurrent with but outside the scope of the grant)

- Heritage Landing tour
- Mitchell Creek Public Education





Before: Elm Street Site within Newaygo County, Muskegon River.



After: Elm Street Site after the implementation of 420 feet of riprap, along with soil and native plants on the the upper slopes.



Before: Mitchell Creek Park site with heavy foot traffic, adding sediment to the creek.



After: Mitchell Creek Park Site with 750 feet of rock riprap.