



**Federal Clean Water Act  
Section 319 Grant**  
2003-0043



**Muskegon River Watershed Assembly**  
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## Bear Creek (Muskegon County) Transition/Implementation 1

September 27, 2004 through June 30, 2007

The Bear Creek Watershed is part of the Muskegon River Watershed and is located in Muskegon County, Michigan. Its mouth is at the Bear Lake Channel and flows into Muskegon Lake which flows into Lake Michigan. The Bear Creek/Lake Watershed land area is approximately 29 square miles and lies within five governmental units. In 2001, the Muskegon Conservation District received a Watershed Management Planning Grant and developed the Bear Creek & Lake Watershed Management Plan, finalizing it in March 2004. The goal of this project was to reduce/eliminate high priority causes of nonpoint sources of pollution by addressing road/stream crossings, stream bank erosion sites, and priority habitats. In addition, the information and education strategy was designed to encourage public involvement and education of watershed issues.

<b>Grant Amount:</b>	<b>\$ 95,297</b>
<b>Match Funds:</b>	<b>\$ 92,364</b>
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<b>Total Amount:</b>	<b>\$ 187,661</b>

### Best Management Practices:

- 1,284 linear feet of streambank stabilized using Coir (Fiber) Log Revetments, Log Revetments, Brush Bundles, Check Dams and Native Plantings.
- Installed a Stormwater Filter Swale as a Demonstration Project at Bear Lake Park.
- Converted 75' of Bear Lake Shoreline to a Native Vegetative Shoreline Buffer.

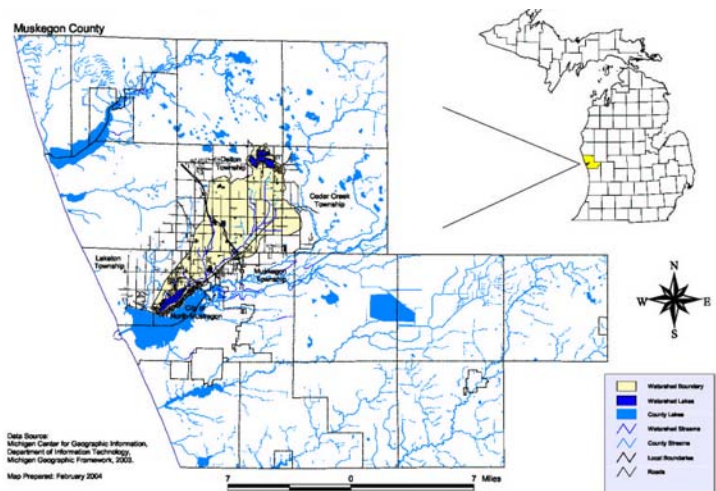
### Annual Load Reductions:

- Sediment - 204 (tons/yr)
- Phosphorus - 1,599 (lbs/yr)
- Nitrogen - 320 (lbs/yr)



### I&E Activities:

- Poster Contest for area school students
- Two volunteer clean-ups
- Watershed Festival at Twin Lake Elem.
- Storm drain stickers - Ruddiman Ave.
- Adopt-a-Watershed program - 3 groups
- Nine newsletters and two brochures mailed to area citizens
- Four public meetings



### Partners involved:

- Muskegon Conservation District
- Wege Foundation
- Natural Resource Conservation District
- Muskegon County Road Commission
- City of North Muskegon
- Schultz Land & Water Consulting, Inc.
- Tom & Jan Hamilton





**Site BC2 (Before):** This eroding streambank was contributing sediment to Bear Creek. The severe slope and sandy conditions were contributing to the bank erosion.



**Site BC2 (After):** Three (3) check dams were placed along this tributary of Bear Creek; the bank was reshaped, seeded with native grasses and covered with an erosion control blanket.



**Site 17 (Before):** Undercutting was occurring on this streambank and was causing the upper bank to collapse, contributing sediment to Bear Creek.



**Site 17 (After):** Coir (Fiber) Logs were installed to stabilize the toe of the bank. The upper bank was reshaped, seeded with native grasses and covered with an erosion control blanket.



**Students at Twin Lake Elementary participated in five water quality sessions at the Bear Creek Watershed Festival.**



**Fifty-five tires, five barrels, a toilet and much more trash were collected at two sites during the Bear Creek Watershed Cleanup.**