



**Federal Clean Water Act  
Section 319 Grant  
Tracking code 2004-0136**



**Grand Valley Metropolitan Council**  
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## Lower Grand River Watershed Implementation Project

January 1, 2005 through August 30, 2008

The Lower Grand River Watershed (LGRW) Implementation Project was awarded to the Grand Valley Metropolitan Council, who contracted with Fishbeck, Thompson, Carr & Huber, Inc. and GVSU's Annis Water Resources Institute, to complete the project. The goals of the LGRW Implementation Project were to: 1) Update the Buck Creek, Plaster Creek, and Coldwater River watershed management plans to meet the U.S. EPA's Nine Required Elements; 2) Provide water quality data concerning *E. coli* to focus on specific pollutant sources to meet the water quality standards; 3) Address the sources of *E. coli*; 4) Increase awareness and understanding of water quality impairments caused by *E. coli*; and 5) Work cooperatively and share information with other groups and organizations within and around the LGRW.

**Grant Amount: \$ 264,900**  
**Match Funds: \$ 175,300**


**Total Amount: \$ 440,200**

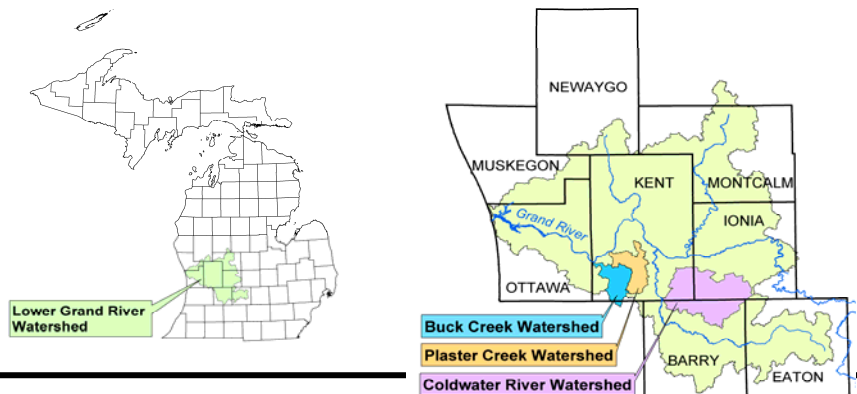
### Best Management Practices and Load Reductions:



- Pet waste stations: City of Grandville (8), City of Kentwood (6), City of Wyoming (7), and Coldwater River Watershed (2). Resulted in  $7.916 \times 10^{10}$  Fecal Coliform colonies/day reduction.
- 4,489 linear foot switchgrass filter strip on Pratt Lake Creek. Resulted in reductions in Sediment: 176 tons/year, Phosphorus: 237 pounds/year, Nitrogen: 428 pounds/year.
- BEDHD Septic System Regulations. Resulted in reductions in Sediment: 2 tons/year, Phosphorus: 12,682 pounds/year, Nitrogen: 93,003 pounds/year.

### I&E Activities:

- Distribution plan developed for education programs and activities.
- Printed educational materials:  septic system management, pet waste, and landscaping for water quality.
- Classroom presentations.
- Updated Watershed Interactive Tool.



### Monitoring Activities:

- 53 dry weather stations - Tested by Kent Co. Health Department
- 13 wet weather stations - Tested by Summit Laboratory
- 6 stations in Coldwater River Watershed for Microbial Source Tracking -- Analyzed by Michigan State University
  - Bovine sources predominant
  - Human sources near Village of Freeport

### Partners involved:

- Fishbeck, Thompson, Carr & Huber, Inc.
- GVSU Annis Water Resources Institute
- Barry Eaton District Health Department (BEDHD)
- Byron, Cannon, Cascade, and Gaines Townships
- Calvin Christian High School
- Calvin College
- Center For Environmental Study
- Cities of East Grand Rapids, Grand Rapids, Grandville, Kentwood, Wyoming, Walker
- Coldwater River Watershed Council
- Frey Foundation
- Kent County Drain Commissioner
- Kent County Health Department
- Kent County Road Commission
- Michigan State University
- Ottawa County Drain Commissioner
- Ottawa County Road Commission
- Summit Laboratory
- West Michigan Environmental Action Council



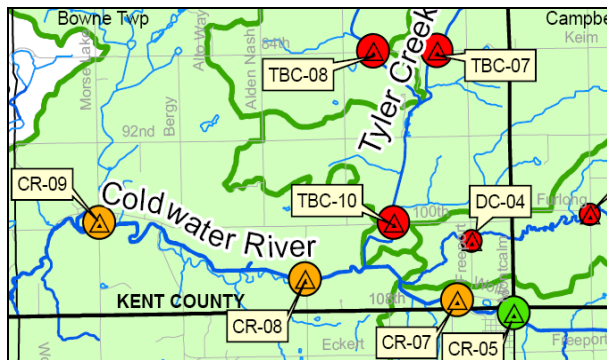
**Pratt Lake Creek, tributary to Tyler Creek Before.**

The site is located in Bowne Twp, Kent County, MI. The land was farmed and manure was spread adjacent to the banks of the creek, where pathogens such as *E. coli* directly entered the water.



**Pratt Lake Creek, tributary to Tyler Creek After.**

The switch grass filter strip was well established by June 2007; the grasses were planted in April.



LEGEND	
PERCENT OF SAMPLES EXCEEDING CRITERIA	
●	0% - 33%
●	34% - 66%
●	67% - 100%
NUMBER OF CALENDAR MONTHS EVALUATED	
○	6 MONTHS
○	7 MONTHS
○	13 MONTHS

**Water Quality Monitoring Results:**  
*E. Coli* Samples exceeding 300 CFU/100 mL.



**Pet Waste station installed in Heritage Park in Grandville, MI.**