

Title: Planter Creek Bacteria Reduction Project

Waterbody Improved: Planter Creek (AUID number 040201010204-01) is a tributary to the Black River in Gogebic County, near the community of Wakefield, Michigan. Planter Creek is on the Clean Water Act section 303(d) list of impaired waters for high bacteria concentrations that exceed both the partial body contact recreation and total body contact recreation water quality standards.

GRTS Numbers: 97547408-01 and 98502315-01 (pre and post monitoring support, respectively).

Problem: 9.1 miles of Planter Creek exhibited high *E. coli* concentrations and does not support partial or total body contact recreation, due to combined sewer overflow (CSO) discharges.

Project Highlights: Between 1996 and 2012, two CSOs were separated into sanitary and storm water sewers.

Results: After the CSOs were eliminated, *E. coli* geometric mean concentrations declined substantially (Table 1):

- From 338 to 39 colony-forming units (CFUs)/100 mL at Wertanen Road (an 88 percent decline)
- From 258 to 148 CFUs/100 mL at Thomaston Road (a 43 percent decline)

Planter Creek now meets the state's partial body contact recreation criteria of 1,000 CFUs/100 mL, but does not yet meet the full body contact criteria of 300 CFUs/100 mL. MDEQ intends to delist the creek for partial body contact recreation in the 2018 Integrated Report.

Partners and Funding: Sewer separation construction grants were obtained by the City of Wakefield. Grants and loans from the U.S. Department of Agriculture Rural Development program (\$15 million), the U.S. Army Corps of Engineers (\$6 million), and the Michigan Economic Development Corporation (\$200,000), and user fees from the citizens of Wakefield paid for this project. The Michigan DEQ funded the pre- and post-BMP monitoring.

Photographs:

None.

Data table:

Table 1. Pre and post *E. coli* data.

Sampling site	2008 Geometric Mean (CFUs/100 mL)	2015 Geometric Mean (CFUs/100 mL)
Wertanen Road	338	39
Thomaston Road	258	148

CFUs = colony-forming units

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