



**Clean Michigan Initiative
Nonpoint Source Grant**
1999-0039



Kent County Drain Commissioner
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Plaster Creek Stormwater Detention Basin Retrofit

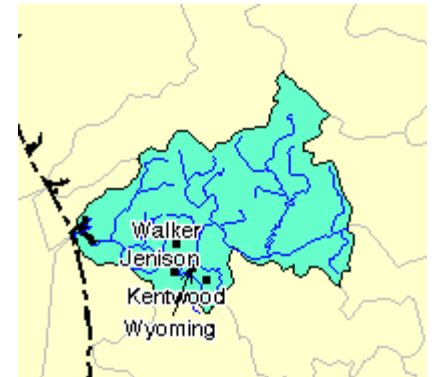
August 1st 2000 - June 30th 2003

Plaster Creek flows into the Grand River located in Kent county. Within this area, there are two detention basins that flow into the Plaster Creek, the Laraway-Brooklyn basin and the Wyoming detention basin. Storm water runoff in this watershed originates from commercial, industrial, transportation, and residential land uses. Land use in the watershed is 30% commercial, 40% industrial, and 30% residential. Pollutants of concern include nutrients, non-soluble metals, and sediment originating from urban storm water runoff. These pollutants have a direct impact on the designated uses of Plaster Creek as a warm water fishery and an urban recreational resource. The goal of this project was to retrofit two detention basins to provide increased capacity, filtration and biological uptake of nutrients.

Grant Amount: \$ 386,100
Match Funds: \$ 128,700



Total Amount: \$ 514,800



Best Management Practices:

- At Wyoming DPW, extended detention basin, sediment basin, protected soils with riprap and soil erosion controls
- At Laraway-Brooklyn, constructed 1 detention basin retrofit, 2 sediment basins, protected slopes with riprap, and wetland enhancement with wetland plantings, riprap



Annual Load Reductions:

- 110 tons of sediment annually
- 0.15 tons of phosphorus annually

Partners involved:

- Kent County Drain Commission
- City of Grand Rapids
- City of Wyoming
- Michigan Department of Environmental Quality
- Center for Environmental Studies
- Fishbeck, Thompson, Carr & Huber Inc.





Laraway-Brooklyn Project - Alger/Kalamazoo Sediment Basin (October 1999)



Laraway-Brooklyn Project - Alger/Kalamazoo Sediment Basin, low flow channel within grassed sediment basin (May 2003)



Laraway-Drain: Looking upstream from bridge crossing (October 1999)



Laraway-Drain: Looking upstream from bridge crossing (May 2003)



Deep Pool - Looking upstream from outlet (October 1999)



Deep Pool - Looking upstream from outlet (May 2003)