



Federal Clean Water Act Section 319 Grant

Tracking code: 2004-0168



Huron River Watershed Council

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Sarah Banks Middle School Stormwater BMP Retrofit

January 2005 - June 2007

Sarah Banks Middle School is located north of Wixom, MI, draining to Norton Creek in the Huron River Watershed. High levels of nutrients, primarily phosphorus, in storm water runoff are causing water quality problems in the Huron River Watershed, including Kent Lake where a Total Maximum Daily Load (TMDL) has been established. This project demonstrated one way that existing infrastructure can be retrofitted, or modified, to improve water quality. The detention basin at Banks Middle School was a large grass-filled bowl in front of the school, used primarily for flood attenuation. This project involved converting the Banks detention basin into a storm water wetland, which will remove phosphorus from the storm water before it discharges to Norton Creek.

Grant Amount: \$80,900

Match Funds: \$35,300

Total Amount: \$116,200



Best Management Practice:

Detention basin retrofit:

- Sediment forebay
- Stormwater wetland
- Micropool
- Outlet structure improvement
- Bank stabilization



Annual Load Reductions:

- 8.4 pounds of phosphorus
- 2.3 tons of sediment
- 38.3 pounds of nitrogen



I&E Activities:

- Fact sheets
- Newsletter articles
- Project presentations
- BMP tours
- Student outdoor laboratory
- Professional journal article



Partners involved:

- Walled Lake Consolidated Schools
- City of Wixom
- Oakland County Drain Commission
- Limno-Tech, Inc.



Original detention pond in dry period with **inlet** and **outlet** indicated.



Volunteers planting native wetland plants following construction. New outlet structure indicated; erosion control blankets shown.



Retrofit construction with **forebay**, **main wetland** and **micropool** indicated.



Final storm water wetland in June 2007 in high water period.