Clean Michigan Initiative
Clean Water Fund Grant
Tracking Code 2005-9120

THE FORUM OF GREATER KALAMAZOO
A Catalyst for Community Improvement
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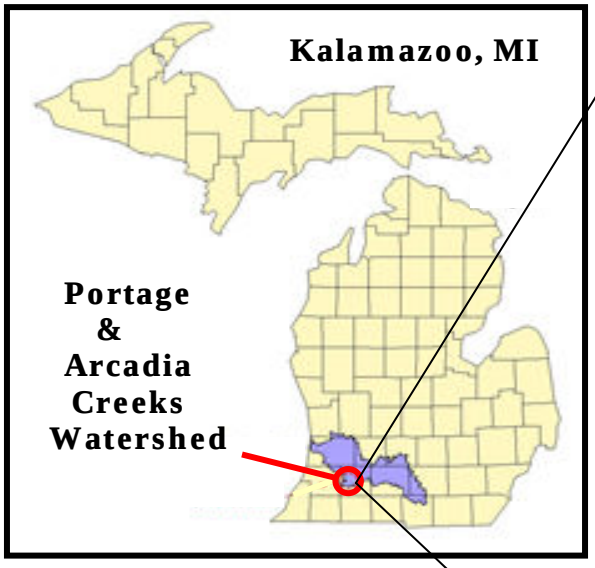
Portage-Arcadia Creek Watershed CMI Implementation Grant Project

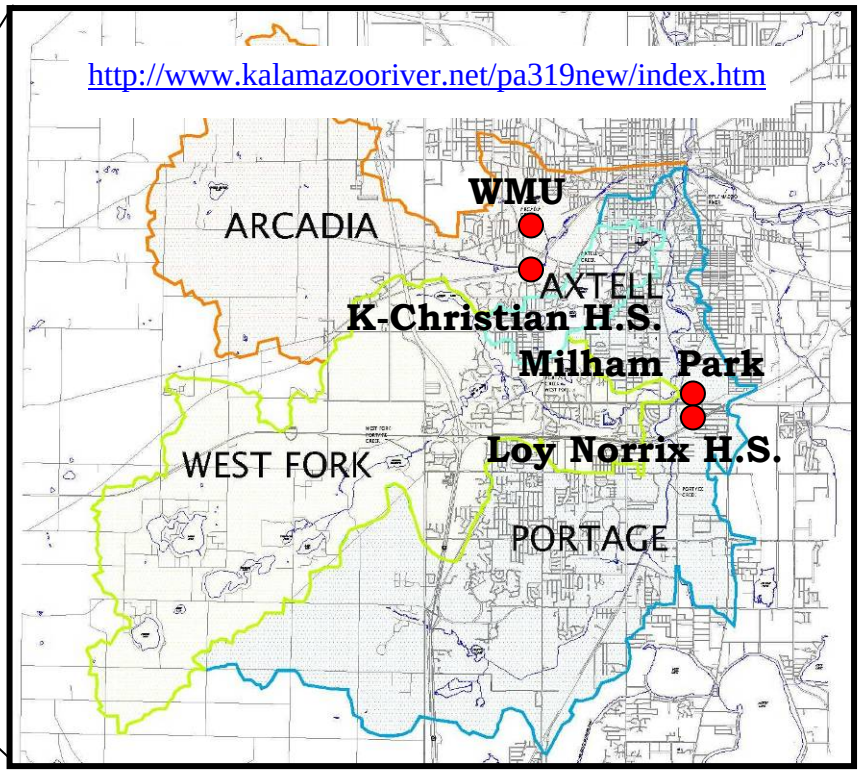
Sept 2005 to Dec 2008

The goal of this project was to implement priority actions in the Portage and Arcadia Creek Watershed Management Plan, and to provide educational opportunities at two locations, below. Best management practices implemented at these two sites were designed to reduce flashy stream flows during rain storms that destroy stream habitat and erode stream banks.

Arcadia Creek (Site #8) – Kalamazoo Christian H.S. and Western Michigan University (WMU). The practices installed stabilized the stream bank and provided shade for the creek, increased wetland size to store water during storms and provide valuable water quality and habitat benefits. The practices also keep storm water on WMU's campus and out of the creek.

Portage Creek (Site #10) – City of Kalamazoo Milham Park and Loy Norrix H.S. Approximately 2,900 feet of Portage Creek stream banks located within Kalamazoo's Milham Park were highly eroded and subject to further degradation. Best management practices implemented at this location were designed to reduce storm water runoff from Loy Norrix High School, restore eroding stream banks along Portage Creek and reduce waterfowl impacts within Milham Park.





Grant Amount: $ 445,808.00
Match Funds: $ 229,231.19

Total Amount: $ 675,039.19

Partners involved:

- Community representatives
- Quantum Construction
- Wildtype Nursery
- Kalamazoo Public Schools
- Kalamazoo Christian Schools
- Steve Keto
- City of Kalamazoo
- Western Michigan University
- Dr. Mike McCarville
- The Forum of Greater Kalamazoo
- City of Portage
- Master Gardeners
- Michigan Department of Environmental Quality
- Dr. Don Brown
- Kalamazoo County Environmental Health and Services Dept.
- WildOnes Natural Landscapers
- Kalamazoo River Watershed Council
- Geum Services Inc.
- The Gun Lake Tribe
- Kieser & Associates, LLC

I&E Activities:

- A total of six (6) permanent educational signs were installed throughout these project sites.
- Students and staff from both High Schools were involved with native planting efforts.

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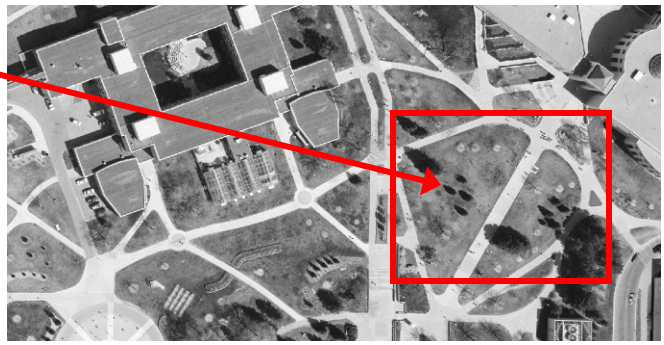
Bioretention/infiltration basin for capture and treatment of on-site storm water runoff.

After Photos:
Western Michigan University

Before Photo:
Western Michigan University
Project Area



ARCADIA CREEK
Best Management Practices:

- Native riparian buffer vegetation = 2.5 acres
- Streambank stabilization = 2,300 feet
- Riprap toe protection measures = 115 feet
- Supplemental vegetative plugs = 3,500 plants
- Reduction of resident nuisance waterfowl

Annual Load Reductions:
- Reduction of 154 pounds total phosphorus/year
- Reduction of 150 tons sediment/year
- Reduction of 308 lbs total nitrogen/year

MILHAM PARK
Best Management Practices:

- Native riparian buffer vegetation = 1.1 acres
- No mow riparian buffer = 6,900 feet
- Stream bank stabilization = 1,500 feet
- Grade control W-weir cross vane = 45 feet
- Riprap toe protection measures = 300 feet
- Supplemental vegetative plugs = 1,500 plants

Annual Load Reductions:
- Reduction of 70.3 pounds total phosphorus/year
- Reduction of 41.3 tons sediment/year
- Reduction of 140.6 pounds total nitrogen/year

WMU (match site)
Best Management Practices:

- Bioretention/infiltration = 1.7 acre-feet
- No net increase in storm water runoff = 100% capture
- Supplemental vegetative plugs = 2,400 plants

Annual Load Reductions:
- Reduction of 34 pounds total phosphorus/year
- Reduction of 1.6 tons sediment/year
- Reduction of 16 lbs total nitrogen/year

LOY NORRIX H.S.
Best Management Practices:

- Bioretention/rain gardens = 1.5 acre-feet
- Soil stabilization, seed/mulch = 0.97 acres
- Supplemental vegetative plugs = 3,000 plants

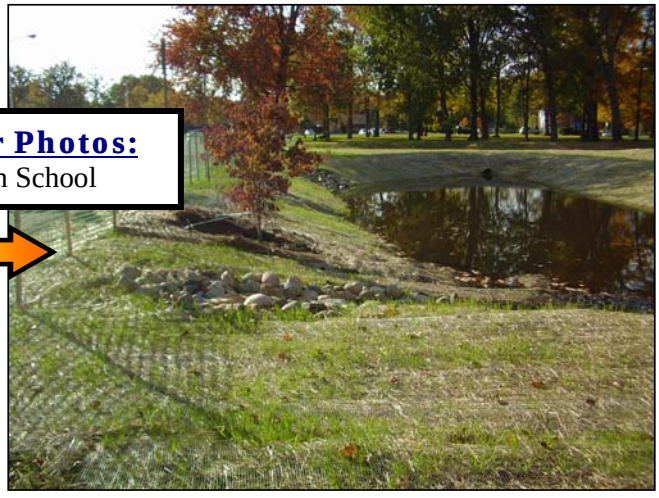
Annual Load Reductions:
- Reduction of 8 pounds total phosphorus/year
- Reduction of 1.9 tons sediment/year
- Reduction of 6.4 pounds total nitrogen/year

Before & After Photos:
City of Kalamazoo Milham Park

Stabilized stream banks and native riparian buffer vegetation (seed and plugs).

Before & After Photos:
Loy Norrix High School

Bioretention/rain gardens for capture and treatment of urban storm water runoff.



Before & After Photos:
Arcadia Creek – Stretch #8

Stabilized stream banks and native riparian buffer vegetation (seed and plugs).