

**ARCADIA CREEK FLOODPLAIN ENHANCEMENT AND STREAMBANK RESTORATION,
KALAMAZOO, MICHIGAN**

Contact: **Mr. Bill Reed**
Executive Director
The FORUM of Greater Kalamazoo
1120 Lakeway Avenue, Ste. 2
Kalamazoo, MI 49001
(269) 324-0512

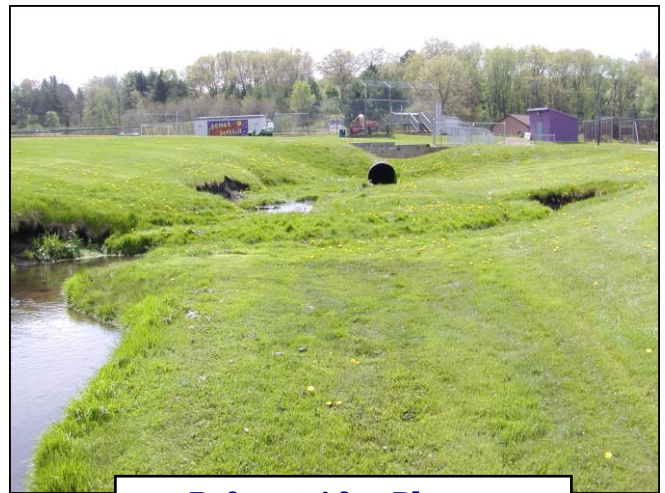
Ms. Julia Kirkwood
Environmental Quality Analyst
MDEQ, Kalamazoo District
7953 Adobe Road
Kalamazoo, MI 49009
(269) 567-3583

Project Costs: **Total: \$159,796, K&A: \$37,550**

Project Completion: **2007**

Clean Michigan Initiative (CMI) Grant funding was provided for the restoration of Arcadia Creek as it passes through the Kalamazoo Christian High School complex at Drake Road and Stadium Drive. Impacts to Arcadia Creek included flashy stream flows during rain storms that often damage stream habitat and erode streambanks. Additional concerns included loss of overhanging stream-side vegetation that would otherwise stabilize streambanks and shade the creek, and loss of wetlands that normally store water during storms and provide valuable water quality and habitat benefits. These concerns were cited within the approved WMP for Portage and Arcadia Creeks.

Arcadia Creek goals at the Kalamazoo Christian High School site included: a) 2,300 feet of restored and stabilized streambanks (using more natural “bioengineering” techniques); b) less runoff from parking lots; c) riparian vegetation with deeply rooted native wetland and prairie species (versus a manicured lawn); and, d) reconnection to floodplains and wetlands. This project improved overall stream habitat conditions for one-quarter of a mile of Arcadia Creek. It also provided some flood relief for downstream areas, and reduced sediment and nutrient loading into Arcadia Creek. Lastly, these efforts provided valuable watershed educational opportunities for students and the general public. K&A provided technical support through limited geomorphology assessment, engineering plans and specifications, owner meetings and approvals, DEQ engineering review submittals, DEQ permit applications, competitive contractor bids, and construction oversight assistance.



Before & After Photos:



ARCADIA CREEK FLOODPLAIN ENHANCEMENT AND STREAMBANK RESTORATION, KALAMAZOO, MICHIGAN

Project benefits included:

- Native riparian buffer seeding/vegetation = 2.5 acres
- Streambank stabilization/bioengineering = 2,300 ft
- Riprap toe protection measures = 115 ft
- Supplemental vegetative plugs = 3,500 native plants
- Permanent educational signs (2) to describe BMP benefits
- Reduction of resident nuisance waterfowl population
- Use of photodegradable erosion control blankets
- Temporary fencing to protect new vegetation
- Reduction of 154 lbs total phosphorus/yr
- Reduction of 150 tons sediment/yr
- Reduction of 308 lbs total nitrogen/yr

Project partners included:

- The Forum of Greater Kalamazoo • Community representatives • Quantum Construction • Wildtype Nursery
- Kalamazoo Public Schools • Kalamazoo Christian Schools • City of Kalamazoo • Western Michigan University
- City of Portage • Master Gardeners • Michigan Department of Environmental Quality • WildOnes Natural Landscapers
- Kalamazoo County Environmental Health and Services Dept. • Kalamazoo River Watershed Council • Kieser & Associates, LLC