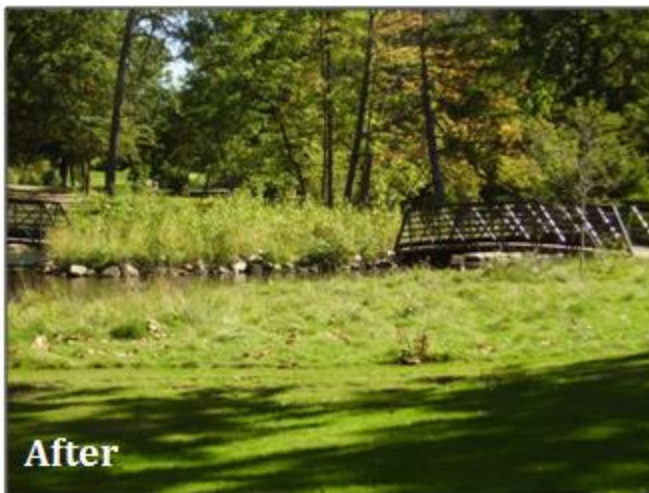


## PORTAGE CREEK STREAMBANK RESTORATION AT MILHAM PARK KALAMAZOO, MICHIGAN



At Milham Park, approximately 2,900 feet of Portage Creek streambanks located within the City of Kalamazoo’s most used public site were highly eroded and subject to further degradation. These concerns were cited within the approved Watershed Management Plan for Portage-Arcadia Creeks. A Clean Michigan Initiative (CMI) Grant from the Michigan Department of Environmental Quality (MDEQ) provided funding toward implementation of the necessary restoration efforts. Milham Park project goals were to establish riparian buffer/no mow zones, repair eroding streambanks, improve riparian

management and long-term stability, reduce annual loss of streambank, improve upon public education, and provide in-stream grade stabilization.

As part of this project, K&A provided technical support through limited geomorphology assessment, engineering plans and specifications, City meetings and approvals, MDEQ engineering review submittals, MDEQ permit applications, competitive contractor bids, and construction oversight assistance.

Project benefits included:

- Native riparian buffer vegetation = 1.1 acres
- No mow riparian buffer = 6,900 ft.
- Streambank bioengineering = 1,500 ft.
- Grade control W-weir cross vane = 45 ft.
- Riprap toe protection measures = 300 ft.
- Supplemental vegetation = 1,500 native plants
- Use of photodegradable erosion controls
- Temporary fencing to protect new vegetation
- Permanent BMP educational signs (3)
- Reduction of 70.3 lbs. total phosphorus/year
- Reduction of 41.3 tons sediment/year
- Reduction of 140.6 lbs. total nitrogen/year

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### Project Costs:

\$24,400 (K&A)  
\$79,849 (Construction)

### Project Duration:

2007 - 2008