

URBAN STORMWATER TREATMENT AND BIORETENTION LOY NORRIX HIGH SCHOOL, KALAMAZOO, MICHIGAN

BEFORE



AFTER



Impacts to Portage Creek caused by direct stormwater runoff from Loy Norrix High School included flashy flows during rain storms that were damaging stream habitat, eroding streambanks, and contributing sediment and nutrient loading to a cool water fishery. 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 assistance toward implementation of the necessary stormwater Best

Management Practices (BMPs). Loy Norrix High School goals were to reduce direct stormwater runoff into Portage Creek from approximately 10 acres of impervious surfaces, capture and treat the first 1.25 inches of precipitation, and establish deep-rooted native vegetation to aid with sediment and nutrient removal.

The efforts associated with this implementation grant were guided by the Steering Committee (SC) process. The Forum of Greater Kalamazoo (Forum) served as the administrative lead and, therefore, the MDEQ grantee for implementation funding. K&A provided technical support through preliminary design, final engineering, construction plans and specifications, owner meetings and approvals, MDEQ engineering review submittals, MDEQ permit applications, competitive contractor bids, and construction oversight assistance.

Project benefits included:

- Bioretention treatment = 1.5 ac-ft
- Soil stabilization, seeding/mulching = 0.97 acres
- Supplemental vegetation = 3,000 native plants
- Temporary fencing to protect new vegetation
- Permanent educational signage
- Reduction of 8 lbs total phosphorus/yr
- Reduction of 1.9 tons sediment/yr
- Reduction of 6.4 lbs total nitrogen/yr

Contact:

Mr. Bill Reed
The FORUM of Greater Kalamazoo
1120 Lake Street
Kalamazoo, Michigan 49006
(269) 329-0882

Project Costs:

\$31,000 (K&A)
\$102,945 (Const.)

Project Duration:

2007 - 2008