

# MAPLE STREET RAIN GARDEN DEMONSTRATION PROJECT KALAMAZOO, MI

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**Total Project Costs:** **\$17,800**

**Project Completion:** **2003**

The City of Kalamazoo was awarded a Clean Water Act Section 319 grant from the Michigan Department of Environmental Quality (MDEQ). Funds were directed to the Kalamazoo Nature Center to construct a rain garden in the Axtell Creek Watershed, in the City of Kalamazoo, and to hold an educational workshop. KIESER & ASSOCIATES (K&A) served as the technical consultant on the project to identify a location for the project, design the rain garden and oversee the construction.



the site selected for implementation of this project.

A primary goal of the Kalamazoo River Watershed Project was to reduce the amount of non-point source pollution caused by storm water runoff. As a result, the Rain Garden Project, was designed to be a demonstration project that would implement an innovative Best Management Practice (BMP) to reduce the amount of storm water entering the local storm drains that discharge into nearby Axtell Creek. Recognizing the planning and other work efforts conducted in the Axtell Creek watershed to date, the South Middle School property was



The removal of a portion of current storm water runoff (through infiltration) from directly entering the watershed was the basis of the design and educational focus. In addition to direct infiltration, the rain garden incorporates biotreatment of storm water runoff. All new vegetation planted within the rain garden consists of Michigan native plant species that are accustomed to a variety of climate conditions, water absorption capabilities, pollutant uptake capacities and root zone depths. The site is located on public property and adorned with an informative sign that furthers the education of the local public on the issues of storm water runoff, watershed contamination (non-point sources), and native habitat preservation.



By capturing and treating a portion of the rooftop runoff at this site, it is estimated that the rain garden prevents 70,300 cubic feet (526,000 gallons) of stormwater, 225 pounds of sediment, 7.6 pounds of nitrogen and 0.5 pounds of phosphorus pollution from reaching Axtell Creek each year. Reducing stormwater flows to Axtell Creek further prevents stream bank erosion and assists with maintaining a more natural flow regime in the creek.