

SOUTH CROSTOWN POND STREAMBANK RESTORATION PROJECT KALAMAZOO, MICHIGAN

Erosion and sedimentation to Michigan lakes and streams threaten and impair water quality and aquatic ecosystem health. Over 1,500 feet of the South Crosstown Pond streambank was exposed and eroding along Axtell Creek. The objective of this project was to eliminate excess sedimentation (>75 tons/year) and phosphorus (>60 lbs/year) loading to Axtell Creek via streambank erosion at one of the City's more problematic stormwater detention ponds. These concerns were cited within the approved Watershed Management Plan for Portage-Arcadia Creeks. Kieser & Associates assisted the City of Kalamazoo by providing environmental consulting services including permitting, site design, contractor/project coordination and construction oversight. Streambank bioengineering and habitat restoration techniques utilized at this site included wet detention seed mixes and plugs, live willow/dogwood stakes and shrubs, erosion control blankets and limited riprap toe protection. These strategic enhancements now serve as long-term erosion controls and stabilization mechanisms while also reducing sediment and nutrient loads downstream. A 20-foot wide transitional upland vegetative buffer, consisting of native plant species, was also incorporated into the site restoration efforts to enhance the existing riparian corridor, enrich site habitat, and improve aesthetics.

The existing streambanks of the South Crosstown Pond were historically maintained as a traditional landscaped lawn by the City of Kalamazoo to accommodate access to outfalls and other utility structures. The nuisance geese problem was also addressed (in part) by eliminating the presence of maintained turf grass up to the water's edge and



planting taller, native plant species suited for both wet and dry conditions.

Local volunteers installed all plants for the South Crosstown Pond Project. Non-profit organizations and local residents combined forces to install 150-200 dormant shrub seedlings at select streambank areas in mid-late October 2003. City of Kalamazoo and Kieser & Associates personnel assisted with coordinating these volunteer efforts. An additional planting endeavor also occurred in 2004, when approximately 2,000 native plugs were installed in two planting bed areas as designated by the City of Kalamazoo. The City has since incorporated these new planting beds into their maintenance program for this site.

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Project Costs:

\$4,000 (K&A)
\$23,500 (Total)

Project Duration:

2004