

Report

**North Branch
Campbell Creek
Stormwater
Management Plan**

City of
Oshkosh, WI

May 2006

Report for
City of Oshkosh, Wisconsin

North Branch Campbell Creek
Stormwater Management Plan

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CONTRIBUTING WATERSHED CHARACTERISTICS

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**APPENDIX A
FLOODING PHOTOGRAPHS**

Grant-Funded Stormwater Projects

Oshkosh - Anchorage Basin Flood Relief Channel

The Anchorage Basin is a 428-acre residential/commercial area in east Oshkosh currently experiencing frequent flooding. This project will convert an abandoned railroad line into a flood relief channel to alleviate this flooding. The proposed flood relief channel will provide a positive outlet to Lake Winnebago to augment the currently undersized storm sewer system serving the area. Construction and replacement of culverts are an integral component of the proposed project. An associated project in this basin, as shown in the table on the front of this brochure, is the Murdock Detention Basin. This detention basin is a component of the overall flooding relief plan for the Anchorage Basin and received funding for property acquisition.

Estimated Construction Cost: \$2 million

Whitewater - Cravath and Tripp Lakes Stormwater and Erosion Control Ordinances

This project was prompted by a study showing that Year 2000 pollutant loadings were expected to result in total phosphorus concentrations in Cravath and Tripp Lakes that exceed the recommended levels for recreational use and for the maintenance of a warm-water fishery. To begin to address these findings, the City of Whitewater sought to establish administrative authority to control stormwater discharge from construction and post-construction sites. The stormwater and erosion control ordinances will minimize impacts of future development and prevent lake degradation. In addition, watershed divide and land use mapping was completed to facilitate future analysis of pollution sources and resultant water quality problems in the lake.

Technical Assistance Cost: \$10,000

Bristol - Pond A Restoration and Enhancement

Pond A was originally built as a flood control pond but provided minimal water quality benefits. This project rehabilitated the existing pond that had filled in with sediment and was becoming a nuisance and potential hazard because of stagnant water and steep slopes. The project design included 4:1 side slopes, a 10' safety shelf, sediment forebay, outlet control structure, 100-year emergency overflow, and shoreline/wet edge seed mix around the perimeter of the pond. The restoration brought the pond into compliance with WDNR Wet Detention Basin Standard and will remove 80% of the total suspended solids reaching the pond from the 73-acre commercial land use watershed. In addition, the pond will control peak discharge up to a 100-year storm.

Pond Construction Cost: \$148,000

Evansville - Lake Leota Watershed Study

As the first step in implementing recommendations in our 2004 Lake Dredging Study, we prepared and submitted two successful Lake Planning grants for the City of Evansville. The study's ultimate goal is to identify and address upstream sedimentation and nutrient solutions in an effort to protect the City's upcoming dredging investment. Lake Leota is an impoundment of Allen



Whitewater - Cravath Lake Waterfront



Bristol - Pond A (Before)



Bristol - Pond A (After)

Creek which originated as a mill pond in 1847. Over time, Lake Leota has filled in resulting in a current, average lake depth of 18-inches or less. This study focused on identification of source areas of nonpoint source (NPS) pollutants, estimation of pollutant loading (TSS and TP) in the lake from upstream agricultural lands and streambank erosion, exploration and recommendation of BMPs to improve watershed conditions, research of funding sources, and development of an informational and educational framework.

Technical Assistance Cost: \$26,666

Hartland - Phase II Stormwater Quality Management Plan

The Village of Hartland was designated by the USEPA and the DNR as a permitted municipality under Phase 2 Stormwater Rules. In response to this designation and in an effort to protect the Bark River and other local resources, the Village budgeted funds to develop a Stormwater Management Plan. The primary objective of the plan was to reduce the adverse impacts of nonpoint source stormwater runoff discharging from the Village to adjacent water resources including the Bark River, nearby wetlands, and groundwater resources. The project mapped the urban discharge points and drainage basins within the Village, evaluated current Village practices and programs, developed SLAMM computer models to estimate pollutant loadings to each identified outfall, identified and evaluated potential types and locations of Best Management Practices (BMPs) to address impacts on stormwater runoff, developed a Capital Improvements Plan on prioritization of stormwater management practices, including stormwater management report, and assistance with grant administration.

Technical Assistance Cost: \$53,000

Madison - Wingra Creek Streambank Restoration - Phase I

Wingra Creek is a major watercourse in the Lake Monona watershed, draining approximately 10 square miles of area in the City and Town of Madison, including UW-Madison Arboretum lands. The Wingra Creek watershed has experienced rapid urbanization, including significant filling of adjacent wetlands over the past century. This has contributed to significant erosion of the streambanks. The goals of this project were to restore streambanks, improve aesthetics of the watercourse, and reduce sediment loss to downstream areas. Since the creek, long ago, was a manmade channel, the City requested that we re-meander the creek to provide greater interest to the route. Streambank restoration techniques implemented on this project are: vegetated geogrid, vegetated boulder revetment, littoral shelf, sack gabions, toe stone protection, and paddling access. Two in-line stormwater treatment devices were also part of this project to help reduce sediment loads to the creek.

Technical Assistance Cost: \$44,300



Wingra Creek - (Before)



Wingra Creek - (After Rendering)