



# Middleton TSS Credit Trade Sauk Point Estates Detention Basin



**CLIENT**  
TOWN OF MIDDLETON

**PROJECT LOCATION**  
TOWN OF MIDDLETON,  
WISCONSIN

**PROJECT DESCRIPTION** In 2003 the DNR issued the Town of Middleton and the City of Verona stormwater permits to discharge stormwater from their respective municipal separate storm sewer systems (MS4). These permits include multiple terms with which the municipalities must comply. As part of the Municipal Pollution Prevention requirement each municipality is required to achieve 40% reduction in total suspended solids (TSS) discharged from their municipal separate storm sewer systems (MS4) by March 2013.

As a proactive measure the Town applied for and received an Urban Water Quality Grant from Dane County for stormwater quality enhancements to the Sauk Point Estates Detention Basin which is located in the Upper Sugar River watershed. Vierbicher modeled the Town's existing stormwater management practices using SLAMM. By field testing infiltration rates in the Town's grass swales, the Town was able to demonstrate compliance with the 40% TSS reduction requirement.

The City of Verona is also located within the Upper Sugar River watershed and was evaluating potential projects which would enable them to comply with the 40% TSS reduction requirement. Because the Town met the requirement and the City did not, the Town and City contracted with Vierbicher to execute one of the first TSS credit trade agreements in the State.

Originally designed as a dry detention basin for a 330 acre watershed, Vierbicher designed a retrofit of the pond to include wet detention and infiltration features. Using SLAMM and HydroCAD, the function of the basin was designed to maximize the amount of TSS removed while minimizing the construction cost.

Vierbicher provided multiple services on behalf of the Town and City such as development of maintenance agreements, an intergovernmental agreement, design, topographic surveys, obtaining construction permits, project bidding, construction observation and administration.