



Landowners in the Blue Earth County Ditch No. 57 watershed needed to replace deteriorated and undersized portions of their drainage system and came to I&S for solutions. The landowners agreed that protection of water quality was an important consideration for the project. Storage and alternative treatment measures, along with smaller improvements to replace the 100 year old drainage system, were evaluated for effectiveness. The 6,000 acre watershed includes runoff from agricultural as well as urban sources.

The preliminary phase of the project investigated various alternatives for improving runoff quality for the watershed. I&S performed hydrologic and hydraulic modeling of the watershed utilizing XP-SWMM and evaluated the impact of the addition of surge basins, in-channel treatment, native grass buffer strips, and a rate control weir at the outlet of the ditch.

Utilizing funding that I&S helped secure from the State of Minnesota through the LCCMR program, nine monitoring stations were also designed throughout the system that will record flow and water quality data.

This project has become a model for future drainage projects across the state and represents a fundamental shift in the way rural drainage systems interact with the landscape. This is a community-based water quality and treatment demonstration project in which landowners, local government, and state agencies have developed a watershed approach to improving water quality and replacing outdated drainage systems.

Conservation Drainage COUNTY DITCH NO. 57 IMPROVEMENT

Blue Earth County, Minnesota

