

### SCOPE OF PROJECT

The Summit Lake watershed consists of 4,900 acres within Union County, Iowa.



The rural area surrounding the Summit Lake watershed has experienced steady growth and development over the past five years. The continuation of these development activities (e.g. construction, impervious infrastructure, storm sewers, etc.) has and will continue to increase stormwater flow levels increasing erosion and sediment discharge into Summit Lake.

### IMPLEMENTATION

**BARKER LEMAR** used stream visual assessment protocol (SVAP) to perform a watershed assessment collecting site specific data along waterways including creeks, drainage areas, and the Summit Lake shoreline. Over 200 individual points were evaluated using tablet computer technology allowing field staff to efficiently assess the watershed. Field staff identified and evaluated shoreline erosion, surrounding land use, storm water discharge points (e.g. field tiles), domesticated animal crossings, and several other land uses. Staff also captured global positioning system (GPS) coordinates for each point and electronically associated coordinates with each photograph for later reference.



**BARKER LEMAR** worked with several strategic partners in the development and of the assessment, including the Creston Waterworks, Southern Iowa Rural Water Association, Union County, and the Summit Lake Watershed Association. Other organizations involved in the project included Iowa State University, United States Department of Agriculture, Natural Resources Conservation Service, IOWATER, and the city of Creston.

**BARKER LEMAR** developed recommendations to improve water quality within the watershed after performing additional research on land use within the watershed, listening to stakeholders, and analyzing the assessment data. The recommendations included erosion and sediment control, lake shoreline management, and education programs.

Each of these recommendation categories are further

**CONTINUED-**

**SUMMIT LAKE WATERSHED ASSESSMENT -  
CRESTON, IOWA**

broken down into sub-recommendations that provide implementation details (e.g. timeframe and estimated costs).

**SERVICES**

Watershed improvement plan; stream visual assessment protocol using GPS and tablet technology to capture and store data; stakeholder meetings to identify solutions to water quality problems.

**TIMELINE**

Project Start Date: August 2007

Project Completed: Ongoing