



Applying knowledge to improve water quality

National Water Program

A Partnership of USDA CSREES & Land Grant Colleges and Universities

Using Social Indicators to Improve Adoption of Land Management Practices in Four Midwestern Watersheds



GREAT LAKES REGION

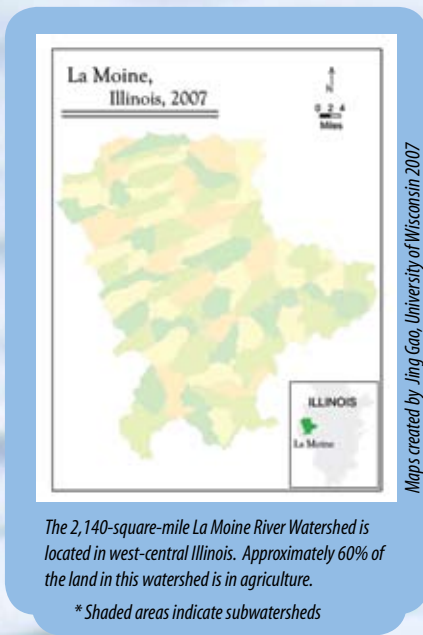
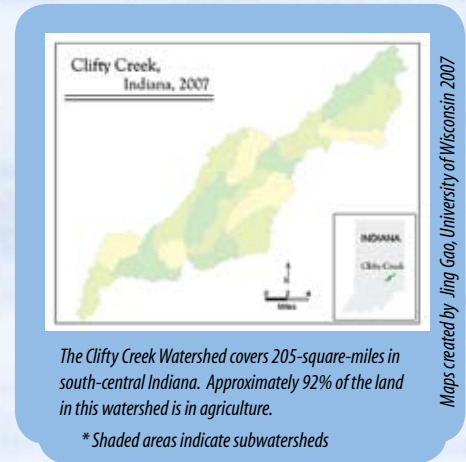
National Themes:
Watershed Management

Introduction and Background

Nonpoint source (NPS) pollution from agriculture is the primary source of water quality impairment in the United States. Because most of the management practices for reducing agricultural NPS pollution are not required by law, addressing polluted runoff in rural agricultural watersheds requires farmers to voluntarily adopt best management practices that may be perceived as directly reducing farm productivity and profitability. When they have a better understanding of the factors that influence farmer decisions to adopt or reject conservation practices, water resource managers can develop more effective education and outreach programs to promote farmer adoption of land conservation practices.

In order to provide water resource managers with the tools they need to better understand the social factors that influence farmer behaviors, a research, teaching, and outreach team was convened by the Great Lakes Regional Water Program and USEPA Region 5 to develop a social indicators framework. The team has worked closely with regional, state, and local stakeholders to develop this framework.

A grant from USDA-CSREES will allow us to test the social indicator framework in four Midwestern watersheds.



Project Description

This three-year study will work with local watershed managers to design interventions (education, outreach, and incentive programs) based on an in-depth understanding of target audiences and social context in four watersheds in the midwestern United States. Throughout the study, we will work with local partners and stakeholders to build capacity and knowledge of social factors that lead to behavior change (i.e., adoption of best management practices). The project timeline includes the following:

Year 1: We will use the recently developed social indicator framework to determine factors that correlate with measurable behavior change of farmers and land managers in project watersheds.

PROJECT TEAM

Purdue University

Linda Stalker Prokopy lprokopy@purdue.edu
Alicia Haley abhaley@purdue.edu
Eric Owiredu eowiredu@purdue.edu

The Ohio State University

Joe Bonnell bonnell.8@osu.edu
Joe Campbell campbell.844@osu.edu

UW-Madison/Extension

Kenneth Genskow kgenskow@wisc.edu
Asligul Gocmen gocmen@wisc.edu
Rebecca Power rebecca.power@uwex.edu
Jing Gao jgao@wisc.edu

Cornell University

Shorna Broussard srb237@cornell.edu

PROJECT PARTNERS

La Moine

Jeff Boeckler jeff.boeckler@illinois.gov
Hall Healy hallhealy@aol.com

Sandusky River-Tiffin

Cindy Brookes cabrookes@wsos.org

Upper Scioto

Ed Miller ed-miller@delawareswcd.org

Clifty Creek

Josh Richardson josh.richardson@in.nacdn.net

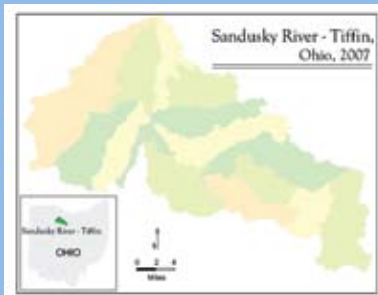
For more information about this project, please contact the principal investigator:

Linda Prokopy, PhD

Purdue University
Phone: (765) 496-2221
Email: lprokopy@purdue.edu

For information about the Great Lakes Regional Water Program, please contact:
Rebecca Power, Regional Water Liaison
Phone: (608) 263-3425
rebecca.power@uwex.edu
<http://www.uwex.edu/ces/regionalwaterquality>

Year 2: We will use this knowledge with local watershed planning and implementation groups to develop interventions that promote behavior change in environmentally critical areas. These tools will be selected based upon our understanding of what motivates and constrains land managers to adopt management practices. Using a paired subwatershed approach in each of the four watersheds, we will apply refined interventions in one subwatershed with the other serving as the control.

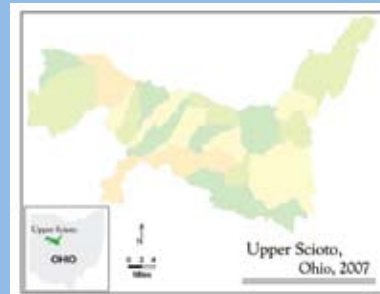


The Sandusky River-Tiffin Watershed covers 117 square miles in north-western Ohio. Approximately 84% of the land in this watershed is in agriculture.

* Shaded areas indicate subwatersheds

Maps created by Jing Gao, University of Wisconsin 2007

Year 3: We will analyze the effectiveness of indicators and interventions and build this knowledge into extension publications directed at stakeholders in the watersheds, an educational curriculum for undergraduate and graduate courses on watershed management, trainings for practitioners at national water conferences, and peer-reviewed journal articles.



The Upper Scioto River Watershed covers 718 square miles in central Ohio. Approximately 72% of the land in this watershed is in agriculture.

* Shaded areas indicate subwatersheds

Maps created by Jing Gao, University of Wisconsin 2007

Anticipated Project Impacts

Results of this project will enhance our understanding of the complex social dynamics that lead to adoption and rejection of conservation practices by farmers and farm managers. This project will also provide information to help watershed managers select social interventions to complement environmental interventions in watersheds. Finally, testing the social indicator framework will ensure that it provides the information necessary for selecting watershed interventions and can be easily used by local watershed managers.

