

# IN THE DITCH - Impacts and Outcomes of Collaborative Efforts

Building bridges between state entities and regional partners to address the most relevant

water quality issues in the Northern Plains and Rocky Mountain region.

Amber Kirkpatrick\*, H. Sessoms\*, K. Hershberger\*, J.W. Bauder\*, B. Esplin\*\*, C. Jordan\*\*

\*MSU Extension Water Quality Program, \*\*Bureau of Reclamation – Great Plains Office



## ABSTRACT

University research and education produces valuable data, statistics, facts and figures but sometimes that information doesn't get to people who could benefit from it most. Multi-agency partnering can lead to positive extension outcomes and help bridge gaps between "scientists" and "non-scientists". Montana State University Extension Water Quality Program (MSUEWQ) and the Bureau of Reclamation – Great Plains Office (BOR) have joined forces and are working with four irrigation districts to positively influence behavior and promote changes in project wide irrigation practices. In these partnerships, MSUEWQ plays the role of technical service provider – conducting research, collecting data, and providing technical information for several on-going debates/discussions related to the management of water resources.

Often, the perception of issues changes and pre-conceived notions are altered when technical information is provided.

### (SHORT-TERM OUTCOMES)

Data compiled by MSUEWQ is used to identify and prioritize actions and find resources to get projects off the ground.

•Sun River Watershed Group gained knowledge about the current condition of water quality in the Sun River and can now identify problem areas in Muddy Creek and Big Coulee.



•Beaverhead Irrigation District gained knowledge of Upper Missouri River flow patterns and sources and improved understanding of water movement patterns in the Beaverhead River basin below Clark Canyon Reservoir.



•Toston Irrigation District made small scale changes based on first years data: pond installation, new datums and staff gages, better pump management (i.e. improved water management).



•Buffalo Rapids Irrigation District and landowners gained knowledge about their soil resources.

### (MEDIUM-TERM OUTCOMES)

Cooperative work between MSUEWQ, BOR, irrigation districts and water user groups has resulted in changes in management practices leading to water conservation, improved water quality and enhanced agriculture.

•Sun River Watershed Group has directed their efforts to study gaps in knowledge identified in MSUEWQ reports.



•Beaverhead Irrigation District improved timing and measurement of deliveries and diversions to maintain in-stream flows.



•Toston Irrigation District irrigators will use data when developing irrigation and land use plans.

•Buffalo rapids irrigators understand possible impacts of coal bed methane on soils within the district.



### (LONG-TERM IMPACTS)

Ultimately, data is used to craft community-based solutions to issues and concerns.

•Sun River Watershed Group has directed funds and efforts to making changes in specific areas where the most significant problems exist.

•Beaverhead Irrigation District has improved project wide efficiency through improved efficiency in irrigation delivery.

•Toston Irrigation District will reduce excess water discharge (and subsequent sediment) into Warm Springs Creek through improvements in water management and delivery.

•Buffalo Rapids Irrigation District and landowners learned the value of collecting baseline soils data before potential impacts occur.

