

# LEADERSHIP FOR MIDWESTERN WATERSHEDS: MEASURING RESULTS PROCEEDINGS SUMMARY

November 8 - 9, 2011  
Ankeny, Iowa

## **Overview:**

American Farmland Trust (AFT), Iowa Soybean Association (ISA), The Nature Conservancy (TNC) and Sand County Foundation (SCF) convened the Leadership for Midwestern Watersheds: Measuring Results meeting on November 8-9, 2011 in Ankeny, Iowa. They brought together project managers from Iowa, Illinois, Minnesota and Wisconsin to discuss the most cost effective ways to document progress in their water quality projects. Participants discussed environmental monitoring, baseline data and the use of social information. Smaller group breakouts identified current activities, successes and challenges and recommendations for improvements in each of these areas. Issues that rose to the top were the need to develop common indicators and protocols, the need to measure short-term (three to five years) change, how to deal with non-resident landowners and how we go from incremental changes at the field level to changes at a watershed scale (“scaling up”). The meeting organizers plan to share the relevant recommendations with USDA NRCS and convene a smaller group to focus on common indicators and protocols. The participants strongly recommended follow-up meetings, particularly about the issues of scaling up and setting up a dedicated website to share materials. AFT is temporarily hosting the website until a more permanent home is found: (<http://www.farmland.org/programs/environment/solutions/iowa-Session-Measuring-Results.asp>).

## **Monitoring:**

The use of environmental monitoring is one of the unique and important components of the Mississippi River Basin Initiative (MRBI) projects. Projects are using a variety of methods and measurements, tracking nitrate or phosphorus or sediment concentrations in streams, at edges-of-fields or at irrigation tile outlets, using both automated collection and “grab” samples, recording biological data, using USGS in-stream monitors and sometimes using paired watershed monitoring to help reduce variability. Participants agreed monitoring helps projects generate momentum for private-public partnerships by raising awareness, target funds more efficiently and makes water quality more tangible to participating farmers by showing how practices on their own farms affect it. The top challenges for environmental monitoring are: uncertainty in funding, the limited time given to projects to collect data, problems of organizing and using the data, complications caused by non-resident landowners and how to get a good baseline when land management practices change year-to-year. Recommendations include: improve the administration and timing of funding, develop common protocols across watersheds, improve flow data, define what measurable change actually looks like and establish water quality goals that relate to what the public wants.

## **Baseline Data:**

Establishing existing conditions in a watershed before or as the project starts, provides project managers with a benchmark they can use to measure changes during the project and determine if they are having an impact and why. Projects are documenting a wide variety of parameters which include establishing biological baselines, doing watershed scale assessments, using RASCAL (Rapid Assessment of Stream conditions Along Length), using remote sensing (LIDAR or Light Detection and Ranging), using physical surveys by driving by fields, mapping conservation practices, recording agronomic data, surveying producers and using information from agricultural retailers. Participants agreed collecting baseline data leads to better targeting,

informs planning for future activities, can strengthen partnerships for monitoring efforts, helps participants understand the potential for change in a watershed and can increase the probability of producers adopting additional practices, particularly if agricultural retailers are involved. Challenges include unrealistic assumptions by funders about baseline data, the time involved in collecting this data, securing data from conservation “late adopters,” accounting for constantly changing land use practices (including the installation of new irrigation tiles) and changing land ownership and tenure. Recommendations include: check small colleges for data, build a database for the MRBI projects, determine the minimum data projects need to collect, require a baseline collection phase to be eligible for grants, allow projects more time to pre-plan and weigh producer preferences and provide greater incentives to producers to adopt multiple conservation practices working in tandem to achieve greater results.

### **Social Information and Indicators:**

Projects hope to change the management and conservation behavior of producers by voluntary means. The social dimension extends to every decision projects make: monitoring design matters, consistency matters (sampling, etc), sampling frequency and timing matters, there is a response lag in a lot of what we do and the voluntary theme to all of our watershed activities influences how we approach people. Region 5 researchers recommend tracking five proxy measures: 1) the practices themselves; 2) constraints; 3) attitudes; 4) capacity; and 5) awareness to give us information about what is happening and whether or not we are having an impact (see the Social Indicator Data Management and Analysis Tool (SIDMA) available on the web through the Institute of Water Research - <http://greatlakeswater.uwex.edu/social-indicators> SIDMA: <http://www.iwr.msu.edu/sidma>). Participants agreed that social data helps them better understand barriers to adoption, select conservation practices that have more support in their watersheds and design more effective outreach programs. Their main challenge is collecting contact information for surveys. Recommendations include: refine survey questions to get at the right issues, track non-response to surveys to engage non-responders, create a toolbox for project managers that includes training in sales; incorporate the public’s perception of what they think is success in their watershed in reporting results of the project and include technical service providers, cooperatives and banks in outreach efforts to producers.

### **Recommendations to Address Common Challenges:**

To address challenges common in these projects, participants recommend: a clearinghouse of protocols used by the different projects to keep track of what works and begin to develop common indicators and protocols; set short-term expectations that can be measured and use a paired watershed approach to eliminate some of the variability in short-term change; design outreach efforts to reach non-resident landowners, and convene a follow-up meeting or webinar to discuss scaling up issues and how to go from practices in the field to changing behaviors in an entire watershed.