

## **Leadership for Midwestern Watersheds**

October 31 – November 1, 2012

Ankeny, Iowa

### **EXECUTIVE SUMMARY**

Leadership for Midwestern Watersheds began in 2011 as a means to bring together watershed project directors and key stakeholders to compare notes and share lessons learned about project design and implementation. The third Leadership for Midwestern Watersheds meeting focused on engaging farmers, targeting conservation practices, and scaling up lessons learned from watershed projects.

Sand County Foundation, American Farmland Trust, Iowa Soybean Association, The Nature Conservancy and the Great Lakes Regional Water Program sponsor LMW meetings to encourage the exchange of information and improve the overall performance of watershed projects in the Midwest, including but not limited to projects receiving funding through the USDA NRCS Mississippi River Basin Initiative (MRBI). This 3<sup>rd</sup> LMW meeting was hosted by Iowa Soybean Association.

The point of watershed projects is to show that changes in agricultural land management can lead to measurable improvements in water quality: specifically, in reductions of nitrogen and phosphorus, nutrients associated with degraded freshwater and marine habitat and use impairments of surface waters from the Great Lakes to the northern Gulf of Mexico. Though we know much more about how to deliver conservation than we did a generation ago, a population with withering links to its agricultural past is bound to see the connection between water pollution and agriculture differently than we do. One researcher of the Gulf of Mexico's hypoxic zone, for example, observed, "Efforts to mitigate and remediate...excess nutrients, although acknowledged by many state and federal institutions as essential, are minimal, ineffective, and stymied by the inertia of a complex, multi-jurisdictional quagmire." This is the context in which those of us on the front lines of conservation are called upon to demonstrate measurable results.

Forty-four participants attended, primarily watershed project directors and staff from Iowa, Minnesota, Wisconsin, Indiana and Illinois; 13 were attending for the first time. New for this meeting was a pre-meeting survey, providing direction for the discussion during the meeting itself. Over 50 respondents to the survey provided thoughts on the three groups of subjects discussed at Ankeny.

### **Group Insights**

#### **Key Point**

- To significantly improve the chances for success, **watershed planning** involving local farmers, needs to happen first to create the road map for a watershed project.

- The watershed project plan should **identify resource concerns**; establish specific, measurable goals; inventory the watershed; formulate and evaluate alternatives; and make decisions and present a set of integrated solutions along with in-field/edge of field and practice implementation plans (including schedule and resource needs).
- Plans can help the project **incorporate the key factors important to success** (specific, measurable, attainable, realistic, timely and quantitative goals; geographic targeting; stakeholder and producer buy-in; measurement and evaluation; cost effectiveness; and use of adaptive management).
- ***For MRBI, this may mean redrafting project Requests for Proposals (RFPs) to incorporate a planning period and process.*** It could also involve help for existing projects to manage adaptively (i.e. retroactively develop watershed plans). Agency representatives present made clear that in MRBI, separate funding for planning might be difficult to secure.

## Farmer Engagement

LMW meeting attendees mentioned the followings steps toward engaging farmers in watershed projects, including:

- a) Establish **watershed councils** led by or at least actively involving farmers and employ performance-based tools or indicators (e.g. phosphorus index, soil conditioning index, cornstalk nitrate tests) to provide valuable information on how well they are doing and how they can improve. The Hewitt Creek model for organizing a farmer-led project, in which farmer councils are advised by Iowa State Extension staff, was the starting point for discussion.
- b) Develop a **strong core of 4-5 farmers**, who step up in a watershed and reach out to others. This is critically important.
- c) Focus on production, profit and protection to engage farmers: reasons, in addition to conservation, that farmers might have to adopt practices appropriate to each project.
- d) Bring key stakeholders to the table, establish broad partnerships, set realistic conservation goals and make sure that all partners who are providing assistance are on the same page.
- e) Proximity of farmers to one another is important in watershed projects. “Round” watersheds centered around one or more lakes can be easier to work in than “skinny” watersheds on either side of a river.

## Targeting

Targeting, understood generally as directing projects and practices geographically to watersheds, fields and sites on which they will have the greatest positive effect on water quality, is important but the term may alienate people. Key ideas related to targeting were:

- a) Watershed project areas should be the highest nutrient loading areas (determined by modeling if baseline data are unavailable) and then focus down to the farm level and then the field level. Conceptual BMP maps can show farmers where practices need to go and modeling can show what kinds of results you can get by tweaking practices across the watershed.
- b) The current emphasis on edge-of-field and in-stream **monitoring** in all projects should be reconsidered. As long as 10-30 years can be needed to detect a water quality response to changes in agricultural land management; meanwhile, the cost of monitoring takes significant resources away from engaging farmers and changing their behavior. A point made on behalf of monitoring is that some projects have found water quality data useful in engaging farmers.
- c) A key consideration in most projects is **confidentiality of data** about land management practices and even land ownership. Potential use of data gathered in the course of watershed projects by state or federal regulators is a concern among farmers that can deter project participation if not addressed adequately.
- d) Use of **nutrient management plans** as an aid to targeting in watershed projects is widespread, but has limitations. Plans written by private consultants may not be reliable indicators of runoff problem areas.
- e) **Use of LiDAR data**, while presenting confidentiality concerns, has potential as a shortcut to identifying fields and sites vulnerable to runoff events.

### **Scaling Up Lessons Learned from Watershed Projects**

Watershed projects need to account for the **changing face of agriculture** and consider how to **sustain work** to improve water quality. Some lessons from current projects with potential wider application include:

- a) More farmland is part of **very large operations** with owners who are difficult to get to watershed meetings about conservation.
- b) **More land is rented**, which combined with higher crop prices can influence the ability of projects to get practices applied that will benefit water quality in the long run;
- c) **More of the people from whom land is rented are women**, with whom agency staff and parts of the non-profit community need to interact differently.
- d) Sources of funding to **extend the life of projects** may be needed in some watersheds. Point sources of nutrients (e.g. sewerage districts), regulated under the Clean Water Act, could be financial contributors to projects if they could use nutrient runoff reduction as an alternative to expensive nutrient removal water treatment technology. Wisconsin is experimenting, with EPA approval, with watershed-wide compliance plans for point sources of phosphorus.