Agricultural Conservation PLANNING FRAMEWORK

# ACPF USE EXAMPLE:
# Root River Watershed in Southeast Minnesota

**A Q&A with Kevin Kuehner of the Minnesota Department of Agriculture**

## How was the Agricultural Conservation Planning Framework (ACPF) used within the watershed?

In 2009, a group of diverse organizations came together to form the Root River Field to Stream Partnership (RRFSP). The main purpose of the partnership was to evaluate how agricultural practices used in the region affect runoff and water quality in local rivers, streams and groundwater. The group selected three small-scale (HUC14) watersheds to conduct special long-term research and demonstration projects.

The study was organized into three phases. The first phase was an eight-year baseline period followed by four years of implementing targeted conservation practices in areas at risk for high runoff. This baseline information quantified the amount of nutrients leaving agricultural fields in the watershed and provided a benchmark for measuring changes in water quality once conservation practices were put into action. Within each of the HUC14 watersheds, the team conducted several projects, including long-term edge-of-field and in-stream monitoring, groundwater dye tracing in natural springs, and testing and applying conservation planning tools like ACPF in the study watersheds.

| PHASE I | PHASE II | PHASE III |
|---|---|---|
| Baseline Information Gathering | Walkovers With Producers | Producer Commitment and Implementation Funding |

As Phase I ended, our group went through a year-long planning process in which we formed an informal advisory team to help guide the second phase of the project. Numerous watershed studies have shown that measuring water quality change at a watershed scale is incredibly challenging and complex, and to do so requires the right mix of conservation practices in the right locations. Above all, it requires exceptional participation by farmers in the watershed. We set a lofty goal of targeting 80% of the critical source areas, which are most vulnerable to runoff and contribute the most sediment and associated contaminants in the study watersheds. This would require that every farmer in the study area (47 total) participate.

Through discussions with the advisory team, the RRFSP developed a walkover process modeled after the UW–Madison Division of Extension Discovery Farms' *Field Walkover Guide* to engage farmers in reducing runoff. A retired soil and water conservation technician, Ron Meiners, was hired as a private contractor by the Fillmore Soil and Water Conservation District (SWCD) to help coordinate the field walkovers. This effort was initially funded by a grant from the Minnesota Department of Agriculture in 2015.

A key factor in improving the field walkover participation rate by watershed farmers was a personalized letter sent by a farmer leader from each watershed. The letters were sent to their neighbors encouraging them to work with Ron, participate in the walkover process and have a no-obligation conversation about potential practices

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Photo: Kevin Kuehner, Minnesota Department of Agriculture

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to reduce runoff. In one of the watersheds, a trusted crop advisor sent the letter. I knew that if the farmers agreed to send a letter, we had built enough trust with the project and were ready to move into Phase II.

In Phase II, we ran the ACPF and generated walkover maps which Ron could review prior to meeting with the farmer. Following the walkovers, producers received a simple one-page walkover report along with an individual action plan. Ron then visited again to discuss the report and discuss how the farmer wanted to move forward. Local farm leaders were the first to participate in the walkover process and provided the team constructive feedback on their experience before we reached out to new individuals. Having farmer leaders invested in this process as well as a dedicated walkover technician were paramount to achieving the exceptionally high farmer participation rate.

## How did ACPF fit into your watershed planning process?

In most cases, the ACFP maps were used as a guiding tool prior to conducting the walkover visits instead of being used when meeting with farmers. In some instances, farmers did not feel their property was a high-runoff risk site, and in those situations the maps were used to objectively explain why their land was a critical area.

## Who ran ACPF? Who shared the results?

A University of Minnesota student who was working with the Minnesota Department of Agriculture ran the ACPF. Using those results, I developed map packets that Ron used for the field walkovers. We would review the maps together so that Ron was prepared. After the walkover, Ron shared the walkover results with producers during individual meetings on their farm.

## How was ACPF used?

### Make more efficient use of field visits

The team used the ACPF maps to prepare for conversations with farmers in the project area, focus and prioritize the field walkovers and track progress in addressing critical source areas with conservation practices.

### Conduct watershed planning and prioritize cost-share

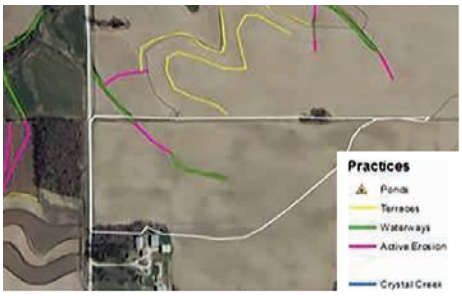
The team used the ACPF maps to plan and prioritize opportunities across the project area. Several ACPF outputs were used to determine eligibility for a special incentive program to target perennial vegetation.

## What about ACPF made it helpful?

Overall, we used close to twenty maps for each property. In our experience, one of the most useful ACPF outputs was the runoff risk map. This output helped identify fields with both a steep slope and proximity to a perennial stream. This information was used to prioritize locations for the field walkovers, cost-share and incentives.

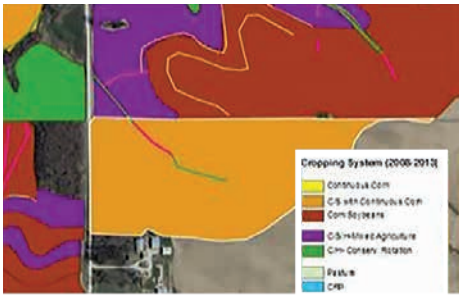
The stream power index was also a very important output for helping target concentrated flow areas and grassed waterways. One of the more powerful

Existing Practices

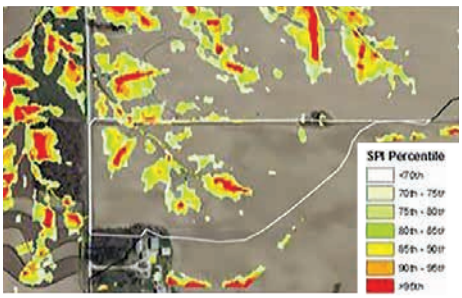



Concentrated Flow Areas


6-year Rotation




General Erosion Risk Areas




Examples of some of the ACPF maps generated for the Root River Watershed.

Images by the Minnesota Department of Agriculture

aspects of ACPF is that it allows you to quickly and easily find the cropping system history for farms. On a larger scale those outputs are critical because you can quickly discern what kind of farm you are working with and how those fields have been managed over the years.

## What tips or advice would you give to others working with ACPF in a watershed context?

Building and maintaining strong relationships is key! The team conducted baseline monitoring and farmer surveys and took the time to meet with producers, understand their operations, and gather input about the best engagement approach. Equally as important is to make sure that contractors, conservation partners and other local stakeholders are on board with your project and can make it a priority.

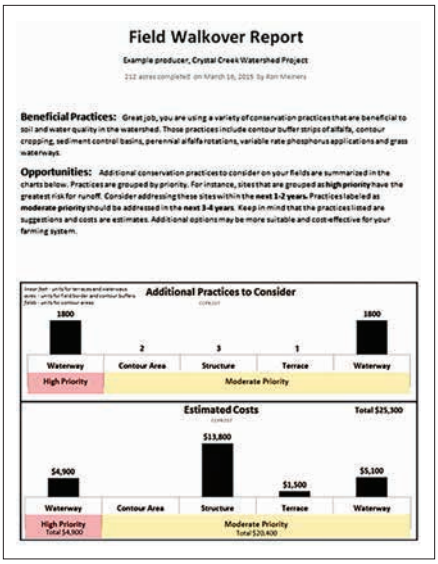
Don't engage producers until you have done your homework. Before engaging, be sure you are confident that you can provide the technical and financial resources and the highest level of customer service.

Also, it was a priority during the walkover follow-up meetings to keep things simple and ask the farmer to tackle just one project the first year. The walkover reports sent to producers were only one page, and it was extremely important to emphasize what producers were already doing right. The reports also summarized opportunities to address other prioritized resource needs and estimated costs. The opportunities were color coordinated: red meant "fix soon," yellow meant "fix in the next two to three years," and green meant "keep up the good work."

The team made sure to return the reports no more than two weeks after the walkover and schedule a follow-up conversation. The producers highly valued that frank consultation. They weren't too concerned with the maps itself, more with chatting and getting advice from Ron.

After reviewing the report, we entered Phase III of the project. The team asked producers how committed they were to addressing the prioritized resource needs and whether they would sign a letter of intent confirming their commitment to action once the appropriate funding was secured. With their commitment, we were committed to pursuing implementation dollars. Having that level of engagement from landowners made this project much more competitive for federal and state cost-share programs.

For more information, explore the Root River Field to Stream Partnership website at rootriverfieldtostream.org and watch the video about lessons learned.




Example of the Field Walkover Report generated for the producers after each walkover. The report includes information on beneficial practices, opportunities, which opportunities should be addressed ASAP and how much it is anticipated to cost.

**Photo by the Root River Field to Stream Partnership**

## For more information and learning resources, visit acpf4watersheds.org