



2014 Year-End Report

As of January 2015 we are two years into our Wisconsin Farmer-Led Watershed Council Project. The intent of this project at the outset was to reduce phosphorus runoff by engaging farmers on a values level. But in a relatively short time, we've come a long way from talking only about water quality.

As you'll see in the following pages, 2014 was about building our project and council identities, gaining traction with the greater watershed communities, and most important – searching together for the “sweet spot” where farms, soil, and water are all thriving. We learned a lot that will make us more focused and effective in 2015 and beyond.

This work would not be possible without the efforts and resources of many individuals, agencies and organizations, including: the farmer leaders, the Land Conservation Departments of Dunn, Pierce, Polk, and St. Croix counties, the Wisconsin Department of Natural Resources, Wisconsin Farmers Union, the Natural Resources Conservation Service, and the McKnight Foundation.

Julia Olmstead, Project Coordinator

Performance-based
Farmer-Led Watershed
Councils work to
reduce phosphorus
runoff, improve water
quality and enhance
agricultural productivity





The Wisconsin Farmer-Led Watershed Project

began in 2013 as a collaboration between farmers, UW–Extension, and state and county government agencies to improve water quality in the St. Croix and Red Cedar River Basins. Currently, we work with farmers in four sub-watersheds, one each in Dunn, Pierce, Polk, and St. Croix Counties. Our model is based on the idea that when farmers are engaged as partners and leaders in the efforts to reduce agriculture’s impact on water quality, we get better, more sustainable results over the long term.

Each council is structured somewhat differently – some have elected officers, some remain more informal. All groups have a pool of money each year that they control (provided by the McKnight Foundation) and that is used to further water and soil quality work in whatever way they determine is best. Each county engaged in the project has dedicated a half-time conservation planner or technician to work with the group alongside the project coordinator, who works with all groups.

Our work to-date has focused on data collection to create a baseline for phosphorus movement in the watersheds; education for farmers and all project partners on topics related to water quality, soil health, and climate change; and conservation incentives created by the farmers to encourage greater adoption of conservation practices.

Partners:

University of Wisconsin–Extension

Wisconsin Department of Natural Resources

Dunn County

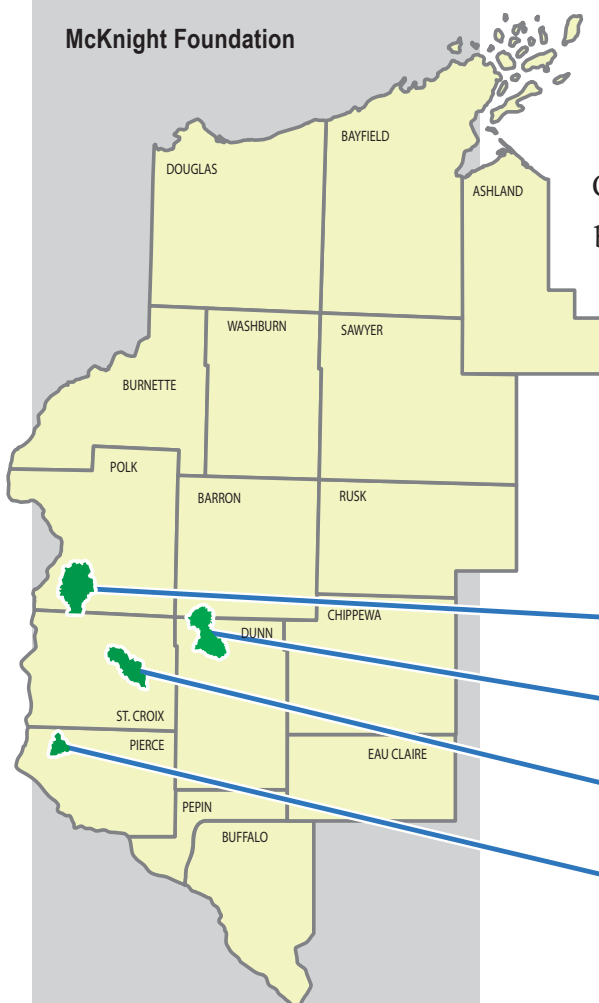
Pierce County

Polk County

St. Croix County

Wisconsin Farmers Union

McKnight Foundation



Horse Creek Watershed

Hay River Watershed

Dry Run Watershed

Rocky Branch Watershed

2014 – WATERSHEDS IN REVIEW

THE NUMBERS:

Feet of New Waterways Installed: **19,410**

Acres of New Soil Samples: **6,760**

Conservation Walkovers: **24**

Farmer Council Work Meetings: **25**



Hay River Watershed, Dunn County

Council Mission Statement (written January 2014): A voluntary, producer-led program to promote and enhance environmentally-sound management of soil and water in the Hay River Watershed.



Edge-of-field water monitoring station in the Hay River Watershed.

The Hay River Watershed Council was launched in the summer of 2013. Much of the 26,493-acre watershed is moderately-to-highly sloped land. Many farms here still have livestock (all but one of the council members has livestock on their farm), which are becoming less prevalent in other watersheds. There are 11 farmers on the council, and an average of nine farmers attend each meeting. In 2014 the group met 10 times.

The group offered two conservation incentives in the spring: a soil sampling cost-share, with a payment that ranged from \$1 to \$4 per acre depending on the age of the sample and the sampling rate (the group wished to encourage recent samples at rates of one per five acres or less) and a \$250 payment for farmers that signed up for a conservation walkover with a planner from the Dunn County LCD.

The group's conservation incentives letter is posted online at:

blogs.ces.uwex.edu/wflcp/files/2014/05/HR-second-round-incentives-letter-2014.pdf

Sixteen farmers participated in the incentives program and 3,134 acres were sampled, using \$12,535 cost sharing. Amanda Hanson from Dunn County LCD did 15 conservation walkovers with farmers, using \$3,750 cost sharing.



Conservation walkover the Rocky Branch Watershed.



Video production in the Horse Creek Watershed.

Rocky Branch Watershed, Pierce County

The Rocky Branch Watershed Committee was launched in the summer of 2013. Rocky Branch – the Farmer-Led Watershed Council Project’s smallest watershed – consists of 7,074 acres. There are 10 members of the committee, with an average of five attendees per meeting. The committee met five times in 2014.

The group offered soil sampling, grass waterway, and conservation walkover incentives. Two farmers participated in the incentives program.

The group’s conservation incentives letter is posted online at:

blogs.ces.uwex.edu/wflcp/files/2014/05/Rocky-Branch-Watershed-2014-Incentives.pdf

In this watershed we worked closely with a private agronomist who reached out to farmers for soil sampling, which resulted in a higher participation rate than in other watersheds. Soil samples were taken on 2,109 acres, conversation technician Dan Sitz did nine conservation walkovers, and 4,725 feet of waterways were constructed.

Due to the small size of the watershed and the high initial participation rates, at the end of 2014 the committee decided it would expand to include the South Fork of the Kinnickinnic River. The watershed expansion (known now as the “South Kinni”) will be the focus of 2015 work.

Horse Creek Watershed, Polk County

Council Mission Statement (written Jan. 2014):

A voluntary, producer-led, performance-based farm and watershed environmental management program for the Horse Creek Watershed.

Meetings of the Horse Creek Watershed Council began in early spring 2013. The watershed consists of 40,435 acres, with declining livestock numbers. Most of the council farmers grow cash crops. Ten farmers make up the council, with an average of seven attending each meeting. In 2014 the group met five times.

The council offered soil sampling and phosphorus index incentives (cost-share) in the spring, with a payment that ranged from \$1 to \$4 per acre depending on the age of the sample and the sampling interval, and an additional \$2 per acre payment for farmers choosing to pursue P indexing.

The group’s conservation incentives letter is posted online at:

blogs.ces.uwex.edu/wflcp/files/2014/05/Horse-Creek-Watershed-2014-Incentives.pdf

The group hosted a community meeting to answer questions about the incentives and inform other watershed farmers about the work of the council.

Fourteen farmers participated in the incentives program and 2,083 acres were sampled using cost-share dollars (\$8,353).

Dry Run Creek Watershed, St. Croix County



2014 flooding in the Dry Run Creek Watershed.

The Dry Run Creek Watershed Council began meeting in spring 2013. The watershed consists of 18,000 acres, with several large farms with a combination of cash crops and livestock, including one Confined Animal Feeding Operation (CAFO). Ten farmers make up the council, with an average of eight attending each meeting. In 2014 the group met five times.

The group offered incentives for soil sampling (\$4 per acre for samples taken in 5-acre increments or less) and grass waterway construction and repair. Six farmers participated in the incentives program, 13,385 feet of grass waterways were installed, and 200 acres were sampled.

The group's conservation incentives letter is posted online at:
blogs.ces.uwex.edu/wflcp/files/2014/05/DR-letter-March-2013.pdf

Dry Run Creek was hit particularly hard by heavy rains in the spring of 2014, and erosion was widespread and very significant. In response, the farmers decided to host a field day focused on climate change and soil health (see sidebar below).

This event was one of the most significant accomplishments of the project in 2014 for several reasons: it was the first time the farmers as a group discussed climate change openly and agreed broadly that not only is it real, but that it is affecting their farming operations; it also served as a sort of “watershed moment” for both the farmers themselves as well as the project team staff – we all came to the conclusion that soil health is the frame that best serves all of our goals; and it has since become central to the way we talk about our work, and to how the farmer groups strategize and set goals.

Climate Change and Soil Health Field Day

Spring 2014 in St. Croix County was disastrous for farmers and farm fields. The area received incredible amounts of rain over a short period of time that led to substantial soil loss and difficulties getting crops planted. Farmers in the Dry Run Creek Council decided that climate change and soil health were topics they needed to know more about. As one producer put it, “what we’ve been doing isn’t working any more.”

On September 5, 2014, the council hosted a field day at Dennis Mitchell’s Ter-rae Farm. More than 60 local farmers showed up to hear presentations on climate change and soil health from University of Minnesota Extension Climatologist Mark Seeley and NRCS Area Resource Conservationist Brian Briski. There seemed to be no



Dry Run Creek climate change and soil health field day.

debate about the fact that weather patterns are changing quickly, and farmers need to find ways to adapt.

Response to the field day was overwhelmingly positive, with some attendees commenting that it was the best field day they’d ever attended. All of the councils expressed interest in follow-up seminars to take the discussion and education to the next step, and those are being planned for 2015.

FARMER PERSPECTIVES

Participating farmers, in a series of interviews and in work meeting discussions, expressed both a sense of satisfaction and hopefulness from being part of the project, as well as an understanding of the challenges the project faces in reaching its ambitious goals of significant phosphorus reductions.



Dry Run Creek Watershed Council meeting.

Hay River Farmer Council member Kate Stout said the project gives her an opportunity to network with farmers she might not otherwise interact with, and a great deal of learning has come from that. Stout said 2014 was about getting the “low-hanging fruit.” “But where do we go from here?” Stout wonders. “It’s hard to come up with shared principles, but that’s what we need to do – and are starting to do. We have to find the things we agree on, then come up with a plan to implement more.”

Horse Creek Farmer Council Member Timm Johnson cited the climate change/soil health field day hosted by the Dry Run Creek Farmer Council as a project highlight, and said it has had a lasting effect within and beyond the watershed. “I’ve heard a lot of talk about what we learned at the field day, including from folks that aren’t part of the council” Johnson said. “It clearly got people thinking about things they could try and changes they could make on their farms. They want to know more.”

Rocky Branch Farmer Council Member Brad Peterson says the project has created a way for farmers to share information with each other, ask questions, and see what works in their area. “To get farmers to try something new,” said Peterson, “it helps to be able to talk about how it will affect their bottom line. In the council we look at all sides of things.”

Hay River Farmer Council member Rick Lohfink expressed frustration with the speed of progress within the project and the level of participation, especially recruitment of large farm operators. “The concept is good,” said Lohfink, but without more people involved it won’t have much of an impact.” Lohfink pointed to the importance of demonstrating financial viability of conservation practices.

PHOSPHORUS INDEXING

One of the objectives of the Farmer-Led Watershed Council Project is to calculate a Phosphorus Index value for the agricultural fields in each watershed. The Phosphorus Index predicts a field's potential to contribute sediment and phosphorus to receiving waters. By calculating this measurement early in the project, a "starting point" for each field would be established.

As conservation practices are implemented, the phosphorus index calculation will be repeated to quantify improvements. This is a very labor-intensive exercise, but we are making progress. Because watershed efforts started at different times (under separate county and UW-Extension projects), some are farther along than others.

Progress by watershed:

HORSE CREEK WATERSHED: Has 10,196 crop acres. Of those, 6,230 acres (61 percent) have had a Phosphorus Index value calculated (average value -1.45). As more soil samples become available, the number of acres indexed will increase.



DRY RUN CREEK WATERSHED: Has approximately 18,000 acres. Approximately 13,500 acres (75 percent) have had a phosphorus index calculated. The information is currently held by another project doing research in the watershed. The Farmer-Led Watershed Council Project is in the process of gaining access to this information.

ROCKY BRANCH WATERSHED: Has approximately 7,000 acres. Soil samples have been taken on 2,100 acres (30 percent), and other cropping information needed to calculate the Phosphorus Index is being gathered.

HAY RIVER WATERSHED: Has approximately 1,600 acres of cropland. Producers have just begun the first step of the Phosphorus Index process – soil sampling. The Watershed Council will be offering an incentive to producers to soil sample their fields. Once this is completed, and other information gathered, the Phosphorus Index can be calculated.

EDGE-OF-FIELD WATER MONITORING

The farmers in the Farmer-Led Watershed Council Project have been greatly interested in monitoring water flowing off their fields. The Councils were able to coordinate with an ongoing project that was developing technologies to provide that type of water monitoring. Across the four watersheds there are now five edge-of-field monitors installed and all will be collecting data in spring of 2015.

The sites include a long-term no-till field, a minimum-till field, conventional-till field, and a non-agricultural natural field. Some preliminary data was collected in 2013 and 2014 and is presented below. *It is important to note that this preliminary data is subject to change as results undergo more intensive analysis.* Not all sites were operational during 2013 and 2014. In 2013, runoff events were recorded but no loads were calculated. In 2014, site number 2 (no-till) had no runoff.

2013 Results (water year: Oct. 1 through Sept. 30)

| Monitoring Site | Runoff Events | Total Volume (cubic feet) | Total Volume (gallons) | Total Suspended Sediment (pounds per acre) | Total Phosphorus (pounds per acre) |
|-----------------|---------------|---------------------------|------------------------|--|------------------------------------|
| 1 | 4 | – | – | – | – |
| 2 | 4 | – | – | – | – |

2014 Results (water year: Oct. 1 through Sept. 30)

| Monitoring Site | Runoff Events | Total Volume (cubic feet) | Total Volume (gallons) | Total Suspended Sediment (pounds per acre) | Total Phosphorus (pounds per acre) |
|-----------------|---------------|---------------------------|------------------------|--|------------------------------------|
| 1 | 5 | 26,857 | 210,559 | 0.405 | 0.0606 |
| 2 | 0 | – | – | – | – |

Photos by Julia Olmstead, Jeffrey J. Strobel and Tim McCabe/NRCS

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