

Profits from perennials

The Chippewa 10% Project will attempt to connect diversified farming, healthy ecosystems, local food & thriving rural economies

By Julia Ahlers Ness

As the executive director of the Chippewa River Watershed Partnership in western Minnesota,

Kylene Olson keeps a close eye on the basin's water quality. The organization does regular monitoring of pollution levels, and compares the data over time. Recent results of some of that monitoring show the need to reduce the runoff making its way into the Chippewa, which is the largest tributary of the Minnesota River—the Minnesota in turn empties into the Mississippi.

"In the lower sub-basins we see lots of nutrients—high levels of nitrogen and phosphorus. And throughout the whole watershed we see high levels of bacteria," says Olson. "In our upper sub-basins where there are more slopes, we're starting to see an increase in sediment settling into the lakes."

It's the same story in many rural watersheds—large and small—that dot the Upper Midwest. It's become clear that basins like the Chippewa need more perennial plant cover—grasses, forages and trees for example—to help keep soil, nutrients and applied farm chemicals from running off the land and into the water. But the Chippewa is a working watershed—almost three quarters of its 1.3 million acres is farmed, and most of that agriculture is based on the production of annual row crops, which only cover the land a few months out of the year.

The good news is that a growing pile of research, including some right in the watershed, shows that farming practices that utilize perennial plant cover on just a small percentage of a watershed's landscape can produce major water quality benefits. Of

course, farmers have to make a living, and in order for them to make water-friendly production practices pay, they need to be rewarded in the marketplace.

It is this recognition that has prompted the Land Stewardship Project and the Chip-

systems in the Chippewa watershed. It's hoped that the "Chippewa 10% Project" will serve as a model for utilizing market-based working lands conservation in other watersheds throughout the region.



Almost three-quarters of the Chippewa River watershed's area is farmed, making agriculture a key ingredient in revamping the basin environmentally and economically. (photo by Julia Ahlers Ness)

pewa River Watershed Partnership to launch an exciting new initiative this summer that is pursuing ways of utilizing markets to promote environmentally friendly farming

10% roll-out event Sept. 30 in Western MN

The Chippewa 10% Project will hold a roll-out event for the public Sept. 30 at the farm of Don and Helen Berheim near Benson, Minn.

The event will feature presentations on how diverse farming systems can help water quality in the watershed while benefiting the local economy and a more vibrant local food system. This event should be of interest to farmers, business owners, natural resource professionals and anyone else interested in connecting land use with watershed health and economic development.

The morning program will be capped off with a free local foods lunch and a demonstration by staff from the University of Minnesota-Morris biomass gasification facility.

For details, contact Julia Ahlers Ness at 320-269-2105 or janess@landstewardshipproject.org.

Why 10 percent?

The Chippewa 10% Project's name is derived from the fact that producing positive impacts in a watershed like the Chippewa can happen without re-making the entire region's landscape. Scientific studies and on-the-farm experience suggest that just a 10 percent increase in the amount of land farmed utilizing diverse crop rotations, grasses and other perennial plant systems can be enough

to meaningfully improve the safety of the water, reduce flood potential, restore wildlife habitat and stimulate a thriving local and regional foods economy. This is especially true if we can target fields that are sensitive to problems like erosion.

Introducing more diverse cropping systems, pasture-based livestock production, small grains and forages into the Chippewa River watershed could result in dramatic reductions in water pollution, according to a modeling study done in the watershed a few years ago by the Multiple Benefits of Agriculture Project, which LSP helped lead. Sediment loading, for example, was cut almost in half when farms were diversified, according to the study.

And a preliminary study in Iowa has shown that covering just 10 to 20 percent of a crop field with strips of deep-rooted prairie grasses cut sediment loss by 95 percent.

"This is really based on the idea that a lot of environmental services can be derived

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from working farms, rather than always relying on land retirement programs,” says Terry VanDerPol, a west central Minnesota beef farmer who also directs LSP’s Community Based Food and Economic Development Program.

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The Chippewa 10% Project recognizes that it does little long-term good to promote the conversion to environmentally-friendly production systems if farmers cannot make such systems pay financially.

“Part of the thing we need to remember is farmers aren’t working in a vacuum,” says



Enterprises such as pasture-based livestock production could help make perennial plant systems such as grass economically viable in the Chippewa basin.

(photo by Rolf Hagberg)

John Westra, an associate professor of agricultural economics at Louisiana State University. Westra has done extensive research on the economics of conservation farming systems in Minnesota and is a member of the Chippewa 10% team. “They’re responding to market signals. They’re responding to policy that we have in the United States in terms of the commodity programs, the conservation programs — all of those provide incentives, or disincentives.”

That’s why a major part of the initiative will focus on creating opportunities for farmers to get rewarded in the marketplace for producing more perennials on the land.

For example, producing environmentally-friendly food such as grass-finished beef or pastured pork for local markets could play a major role in improving the watershed. Western Minnesotans currently spend ap-

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proximately \$334 million buying food each year, and most of it comes from outside the region, meaning a lot of money is leaving our communities on a one-way trip, according to research by economist Ken Meter. Initiatives such as the Upper Minnesota River Valley *Buy Fresh Buy Local* chapter show there is a burgeoning demand for locally-

Another potential market for perennial crops may include the University of Minnesota-Morris’s new biomass gasification reactor.

First steps

Some of the first steps being taken with this initiative are to identify sub-watersheds where promoting more diverse farming systems would provide the most bang for the buck environmentally and economically. The 10% Project’s research team is using a decade’s worth of watershed data to identify and recommend targeted field locations for perennial vegetative cover restoration that meet environmental goals and increase farm income. (It should be pointed out that future modeling in the Chippewa may show it will require *less* than 10 percent transition of land to achieve water quality goals.)

We are also working with farmers, businesses, institutions, nonprofit organizations, scientists, natural resource professionals and government agencies (the watershed spreads over eight counties) to determine what their goals are for the community, and how together we can build the economic and community support needed for a diversified agricultural system that produces quality local foods, thriving communities, diverse economic opportunities and a healthy ecosystem.

“Instead of just trying to establish a few best management practices here and there, the Chippewa 10% Project is trying to empower the farmers in the community to make the kinds of system-wide changes that pay off for the entire watershed and the local economy,” says Olson. “That’s not something that’s being done in the water quality arena right now.” □

Julia Ahlers Ness is a Land Stewardship Project organizer who is coordinating the Chippewa 10% Project.

Partners in Chippewa 10%

The Land Stewardship Project and Chippewa River Watershed Project are co-leaders of the Chippewa 10% Project. Other partners include the USDA Agricultural Research Service’s Soils Lab in Morris, University of Minnesota-Morris, University of Minnesota West Central Research and Outreach Center and Louisiana State University AgCenter.

Other collaborators include the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service. Funders include the Walton Family Foundation and USDA’s National Institute of Food and Agriculture.