

Watershed News

April 2007

South Branch of the Root River Watershed Project

SPRINGS: A BEAUTIFUL RESOURCE



Deep Lake Spring in Forestville/Mystery Cave State Park only flows during the spring and other times with high flows. Photo courtesy of the MN DNR

Springs are a prominent part of the karst landscape in southeastern Minnesota. Springs evoke the image of clean, bubbling water cascading out of rock cliffs in a pristine forest. There are some extraordinary springs right here in Fillmore County,

many of which are located in the watershed

"The best of men is like water; water benefits all things and does not compete with them. It dwells in [lowly] places that all disdain, wherein it comes near to Tao [the Eternal]."
-Lao-Tzu, Tao-te Ching, c. 6th century B.C.

of the South Branch of the Root River. Anyone who has seen any of these springs can understand why early settlers chose to live here after seeing apparently pure, life-sustaining water literally bubbling from the ground year-round in seemingly endless supply. Many towns in the county were established near springs, which served as the communities' first water supplies. They were also used for cooling, milling, railroad water supplies, and fish hatcheries. Looking at these springs now instills the feeling that keeping these waters pure and clean is the highest of endeavors.

Springs (and seeps) are points where the water table and the land surface intersect, and ground water discharges to the surface. Springs range in size from flows of less than a gallon per minute (gpm) to several tens of thousands of gallons per minute. Springs fall into two categories: those that show flow and water quality changes within a few hours after rainfall or snowmelt and those that respond more slowly to these events. Those that respond most quickly are fed directly by surface water entering the ground via sinkholes.

The land area that contributes water to a spring plus the subsurface drainage system make up the "springshed" for a particular spring. In karst landscapes, the boundaries for a springshed are often different from the boundaries of the surface watershed for the stream fed by the spring. This means that sinkholes connected to the spring may be outside the surface watershed boundary for the stream where the spring is located. Those underground pathways to a spring often transport water from the surface several miles to the spring in just a few hours.

Dye trace studies help determine springshed boundaries. Fluorescent dyes are released into sinkholes and neighboring springs are monitored to detect the dyes. When and where they are detected reveals the speed and direction of the water flowing to the spring. This is important information if a contaminant, such as gasoline, manure, or a pesticide, were to be spilled and enter a sinkhole. Responding to the spill is aided by knowing where the ground water is most likely to be impacted.

Please help us in understanding more about springs by cooperating with the researchers who contact you for access to a spring or sinkhole. Thank you!

GRAZING WORKSHOPS OFFERED

Grazers can attend several workshops/field days to learn about managed grazing practices. The Hiawatha Valley Resource Conservation & Development (RC&D) is sponsoring these educational activities to enhance profitability of grazing operations. Presenters include a Natural Resources Conservation Service (NRCS) statewide Grazing Specialist, local/regional NRCS and SWCD staff, and local farmers implementing the managed grazing practices.

Pre-registration is a must because class size is limited. Cost for each class is \$10, or \$15 for a family. To receive a registration form, contact the Hiawatha Valley RC&D at 507-281-1959 ext. 4, or the Fillmore SWCD at 507-765-3878, ext. 3.

Planning a Managed Grazing System This is a classroom session. Participants will go through the process of developing a managed rotational grazing plan for their own farm. Photos and other maps will be provided. A follow-up visit from a grazing specialist to each farm is part of the class.
Wed, May 9, 2007, Zumbrota Library, 1-4pm & 6-9pm

Strategies for Maximizing Forage Production This classroom session is for producers struggling to get their grazing system functioning better.
Thurs, May 10, 2007, Chatfield Library, 1-4 & 6-9 pm

Introduction to Watering Systems This is a hands-on demonstration of planning for and materials needed for the design and installation of watering systems.
Fri, June 1, 2007, K-Fence Store, Zumbro Falls, 1-4 pm; located one mile west of Zumbro Falls on Hwy 60

Pasture Monitoring This is a classroom/field session about when and where to rotate livestock, and to explain the Reserve Herd Day concept.
Mon, June 18, 2007, Dawson Grabau farm, located one mile south of Preston. 1-4 pm & 6-9 pm

Tour of an Established Grazing System Participants will view a well-designed and well-managed rotational grazing system utilizing a strip grazing method. Forage management, fencing and livestock watering systems will be demonstrated.
June 26, 2007, Phil Kreugel farm, located six miles south of Preston, 1-4 pm & 6-9 pm (if needed)

“The care of rivers is not a question of rivers but of the human heart.” -Tanaka Shozo, c. 1900

ANALYZE THE ECONOMICS OF YOUR GRAZING OPERATION

Keeping pasture and hay on the landscape is a primary goal of the watershed project. Permanent vegetation helps reduce runoff and the movement of contaminants into streams and ground water.

Funding for the watershed project includes assistance to livestock grazers to analyze the financial condition of their operations. By understanding an operation’s economic condition, the operator can make sound decisions about things that may improve the financial returns.

The contract for this service has been awarded to Dan Miller of Spring Valley who has extensive background in farm business management and rotational grazing. The analysis will include the 16 standard measures of farm financial progress, an enterprise analysis to measure the impact of any changes that are made, and a narrative about the farm background and current system and any other pertinent information to the economic condition of the operation. An estimated 15 cooperators can apply to participate. In some cases, a before and after analysis can be done if management changes are made in the next year.

If interested in this free service, contact the Fillmore SWCD office at (507)765-3878, x. 3, or email donna.rasmussen2@mn.nacdnet.net. This is on available on a first-come, first-served basis.

*Want a **grazing plan** to improve the efficiency of your operation? Or do you need a plan to qualify for cost-share or other financial assistance for improved management? A grazing plan helps you plan for when and where to rotate the livestock to make the most efficient use of the forage. Ways to improve fencing, forage, and water availability are also part of the plan.*

*Livestock producers in the Root River watershed can get a **FREE** grazing plan just by contacting the Grazing Specialist at the Fillmore SWCD office at (507)765-3878, x.3*

FREE FORESTRY WORKSHOP SERIES

How do you arrange a timber sale? What's the best method for planting trees in your woodland? Is your woodland at risk for diseases or invasive plants? How do I manage my woods for wildlife? Answers to these and other questions are available at a series of forestry workshops offered by the watershed project, DNR and Extension. The workshops also earn credit toward the University of Minnesota Extension's Woodland Advisor Program.

Insects, disease, and how trees grow

Thursday, June 28th, 6:30 pm, Room 108, Fillmore County Office Building, Preston

Forest wildlife and biodiversity

Saturday, September 15th, 9 am to noon, Main Park Shelter, Forestville/Mystery Cave State Park

Tree identification

Saturday, September 15th, 1-4 pm, Main Park Shelter, Forestville/Mystery Cave State Park

Planting trees

Saturday, October 6th, 9 am to noon, CRP planting north of Ostrander

Financial aspects of woodland ownership

Date (in 2008) and place to be determined

The nuts and bolts of timber sales

Date (in 2008) and place to be determined

Watch for details in local newspapers, or contact the Fillmore SWCD at (507)765-3878 for more information.

WANTED!

Wet, marginal cropland along a stream for a wetland restoration project (a.k.a. that wet spot you have trouble farming every other year).

Get paid as much as \$2600-\$3800 or more per acre!

Come in ASAP to take advantage of this one-time opportunity!

Also eligible: highly erodible land and buffers for sinkholes and streams

Contact the Fillmore SWCD at (507)765-3878 or the Mower SWCD at (507)434-2603 for more information.

BENEFITS OF COVER CROPPING

Cover crops are defined by the Natural Resources Conservation Service as grasses, legumes, forbs, or other herbaceous plants established for seasonal cover and other conservation purposes. Cover crops protect the soil during the most vulnerable time of the year. They also capture carbon in the plant's biomass and in the soils, increasing soil organic matter. This promotes water infiltration, which reduces erosion and increases soil moisture. Increased organic matter enhances root growth and earthworm activity counteracting compaction.

Cover crops capture and recycle excess nutrients in the soil profile. Cover crops capture nitrogen and release it as the cover crop decays. Legume cover crops capture nitrogen from the air for a cheap source of nitrogen. By reducing soil loss, phosphorus attached to the soil is also retained.

Proper timing of cover crops can suppress weeds, reducing costs for herbicides. Cover crops are also effective at breaking disease cycles, reducing diseases associated with monocultures.

Cover crops can provide supplemental forage for grazing or harvesting. Winter rye seeded after corn silage or soybeans are harvested can be grazed the following spring. This allows more time for forage in permanent pastures to become better established before grazing them. Rye that is aerial seeded in August can sometimes even be grazed in the late fall.

Sign up for a \$7/acre payment for planting cover crops by contacting your SWCD office.

Timing cover crops can allow double cropping, in effect "harvesting more sunshine." For example, alfalfa planted after harvesting canning crops can be harvested once by the end of the season. Alfalfa seeded later establishes better because of warmer temperatures and less weed competition. Those acres can also be used for applying manure.

Aerial seeding of cover crops will be available again this year *in August* if there is enough interest. Contact the Fillmore SWCD office by July 1st if interested.

Fillmore Soil and Water Conservation District
900 Washington St. NW
Preston, MN 55965

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CERISES NAMED 2006 OUTSTANDING CONSERVATIONISTS

Ray and Donna Cerise of Grand Meadow were named the 2006 Outstanding Conservationists by the Mower Soil and Water Conservation District. The Cerises own and



operate a cash grain farm, raising corn and soybeans. Their farm is located in the Judicial Ditch #1 watershed, which forms part of the headwaters for the South Branch of the Root River. Throughout the years, Ray and Donna have implemented many conservation practices such as waterways, structures,

windbreaks, filterstrips, nutrient management, wildlife habitat and conservation tillage. The Cerises also volunteered some of their land for a Controlled Drainage experiment with the MN Department of Ag. Water management structures are installed to adjust the water table in their fields based on the time of year and weather conditions. Controlled drainage water management leads to 30 to 60% less water leaving the field and reduced nutrients moving to surface waters. An observation well was installed to monitor the effectiveness of the structures. This project is one of two in the State of Minnesota. Ray is a spokesman for this Controlled Drainage project at both the state and federal levels. Ray and Donna are also involved in the new wind energy project that will include installing windmill generators on their farm and others near Grand Meadow. The Cerises are very conservation-minded and believe in teaching others about how to preserve their land for future generations.

REMINDER!

FINANCIAL ASSISTANCE PROGRAMS AVAILABLE FOR THE WATERSHED...

Low-interest loans (3 or 4%) to fix septic systems (also for milkhouse waste systems)

50% cost-share of up to \$1000 for practices to control runoff from feedlots for such things as rain gutters, fencing, freshwater diversions, and grass filters. This can be paired with other cost-share funding for higher cost projects.

\$50/acre/year for three years for buffers around sinkholes, along streams, or field borders converted from cropland to hay or grasses that can be harvested up until September 15 (20 acre maximum)

\$150/acre one-time sign up bonus for enrolling CRP buffers and waterways (20 acre maximum)

Incentive payments for

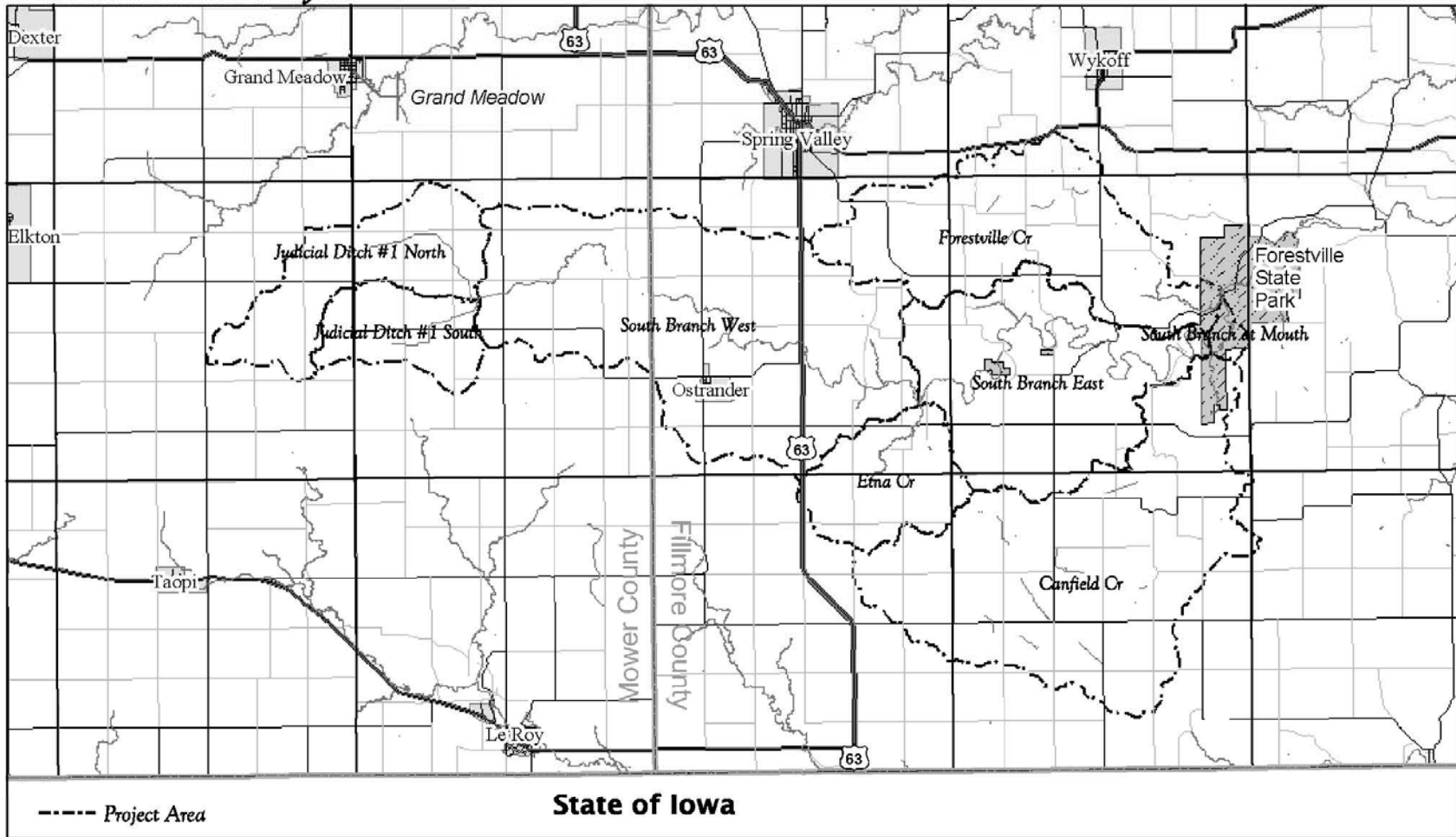
- *Planting cover crops (\$7/acre)*
- *Nutrient management planning (\$4/acre)*
- *Reduced tillage practices (\$7/acre)*

Free Woodland Stewardship Plans

Free Grazing Economic Analyses

Reduced costs for testing well water for bacteria (\$5) and atrazine (\$10)

South Branch of the Root River Watershed Project



	Acres		Acres
Forestville Cr	10,871	Judicial Ditch #1 South	3,263
Judicial Ditch #1 North	5,962	South Branch at Mouth	400
South Branch West	19,795	Canfield Cr	18,406
South Branch East	11,230	Etna Cr	4,403
		Total	74,330

