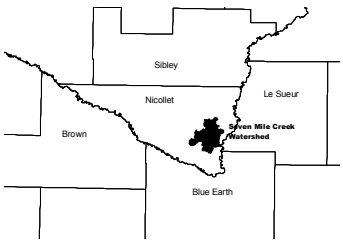
March 2004

Seven Mile Creek Watershed Project

SEVEN MILE SENTINEL

INSIDE THIS ISSUE:



- Seven Mile Creek Watershed covers 23,551 acres and is located between St. Peter and Nicollet.
- 86% of the watershed land use is under cultivation.
- Three main tributaries drain into Seven Mile Creek: CD 13, CD 46a and CD 22.

$23 MILLION IN EQIP FUNDING AVAILABLE TO MN AG PRODUCERS

A milk house wastewater treatment system was recently installed as a result of EQIP funding in the Little Cottonwood River Watershed this past fall. With EQIP and funds from the watershed project, 75% of this project was cost-shared to the dairy farmer.

The Environmental Quality Incentives Program (EQIP) was reauthorized in the latest 2002 Farm Bill. EQIP provides technical assistance, cost-share payments, and incentive payments to assist crop livestock, and other agricultural producers with environmental and conservation improvements to their operations. Many landowners and farmers are not aware of the many programs that EQIP can assist them with. For instance, did you know that area farmers are eligible to receive up to $1,000/year for following a nutrient management plan or $7,500/year for using strip tillage? The insert found within this newsletter contains more information on popular cost-sharable practices within the county. Don't let this opportunity escape you. Stop in and see your local NRCS or contact the SMC project at 507-934-4140 for more information. The 2004 EQIP sign-up deadline for 2004 is May 22.

ROAD SHOW FOR WATER TESTING, HEALTH AND CONSERVATION

For the past 16 years Brown, Nicollet, and Cottonwood County Commissioners and Brown Nicollet Environmental Health have sponsored a project called "Township Water Testing". As part of this project rural residents have been offered private well water tests free or at a reduced rate in each township within the county. In May this service will again be offered to County residents along with a variety of other services.

Water Quality

- Free nitrate tests
- Arsenic tests at reduced rates
- Bacteria tests at reduced rates

Landowners

- Cost share and land conservation program information
- Conservation Reserve Program calculation estimates for interested landowners
- Free manure and soil tests to watershed residents for nutrient management (limited basis)
- Low interest loan septic system upgrade information

Continued on page 2

HEALTH AND CONSERVATION ROAD SHOW...

Air Quality

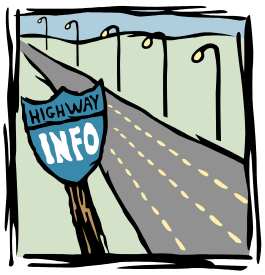
- Home radon test kits and information

Health

- Free blood pressure screening
- Asbestos information
- Mold information
- Home food safety information
- West Nile Virus information

There will be two locations and times in each county.

"Road Show will feature free well water testing to County residents along with many other services."



Road Show Tour Schedule

Tuesday May 18
Brown County
—Comfrey Comm. Center 10:00 a.m.-2:00 p.m.
—New Ulm Public Health Office 4:00 p.m.-7:00 p.m.

Wed. May 19
Cottonwood County
—Jeffers Legion Hall 10:00 a.m.-2:00 p.m.
—Windom Env. Services Office 4:00 p.m.-7:00 p.m.

Thursday May 20
Nicollet County
—Lafayette Fire Station 10:00 a.m.-2:00 p.m.
—St. Peter Community Center 4:00-7:00 p.m.

Living Snow Fence Program

save lives, save money, save time, save soil

Winter is over but its never too late to start planning for next year. *Closed roads . . . reduced visibility . . . whiteout conditions . . . farmsteads without access to emergency services . . . travel delays . . . dumped milk. . . stranded motorists . . . schools closed . .*

Have you noticed big snowdrifts on highways after a storm? Are you ever concerned about your safety during a blizzard? Did you know that something can be done to stop blowing snow? The Minnesota Department of Transportation is identifying sections of highway that experience snow blowing and drifting snow problems. MN/DOT and their partners are working with property owners to design and construct living snow fences that will control the blowing snow and fit into the property owners land use/farming operation.

Living snow fences are designed plantings of trees and/or shrubs and native grasses located along roads or around communities and farmsteads. Properly designed and placed, these living barriers trap snow as it blows across fields, piling it up before it reaches a road, waterway, farmstead or community. (adopted from MNDOT)

Benefits of Living Snow Fences:

- ◊ Prevents big drifts that lead to stranded motorists
- ◊ Improving driver visibility to reduce vehicle accidents
- ◊ Reducing use of the public's money by reducing plowing
- ◊ Using fewer plow truck drivers
- ◊ Lessening impacts on our environment with less salt use, fewer truck trips and less fuel consumption
- ◊ Reducing shipping delays for goods and services
- ◊ Reduces soil wind erosion in the watershed

Typical Living Snow Fence Characteristics

- Eligible areas include locations along State Highways on the north and west sides.
- Typical fence is 1,320 feet long x 40 feet wide or about 1.2 acres in size.
- Living snow fence is typically setback from the highway about 150 feet.
- Living snow fence is 40 feet wide composed of 2 rows of shrubs with a 16.5 foot wide buffer of native grasses planted along each side.
- Shrubs usually consist of lilacs, red and gray dogwood, viburnums, cranberry, or nannyberry and get about 10 feet high.
- On average a typical landowner in the watershed would get paid a total of about **$9,000 over 15 years or about $500/acre!**
- 100% of installation and maintenance is paid for by the program.
- Contact the watershed project or local SWCD if you want more information.

ENVIRONMENTAL QUALITY INCENTIVES PROGRAM
EQIP

2004 EQIP Practices

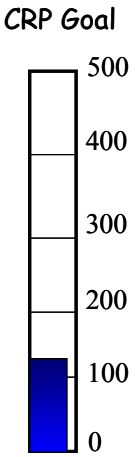
Conservation Practice	Type	Incentive Payment	Contract Lifespan
Contour Farming	Annual	$7.00/acre	1-3 years
Pest management	Annual	$2.00/acre	1-3 years
Cover Crop	Annual	$8.00/acre	1-3 years
Nutrient Management with manure- with out manure-	Annual	 $4.00/acre $2.25/acre	1-3 years
Residue Management- mulch till- no till, strip till- ridge till- seasonal-	Annual	 $15.00/acre $30.00/acre $30.00/acre $7.00/acre	1-3 years
Use Exclusion Riparian- Specialty Crops- Other Crops-	Annual	 $15.00/acre $175.00/acre $75.00/acre	10 years

Conservation practices cost shared @ 50%: anaerobic digester, **animal mortality facility**, closure of waste impoundment, **composting facility, conservation crop rotation**, **contour buffer strips**, **critical areas planting**, cross wind strips, dam, **diversion**, **habitat development, environmental assessment**, livestock shelter, fencing, **field border**, filter strip, fish stream improvement, forest harvest trails and landings, forest stand improvement, forest site preparation, **grade stabilization structure**, grassed water way, heavy use area protection, hedgerow planting, natural wind barriers, irrigation water management., manure transfer, mulching, pasture and hay land planting, pest management, pipeline, pond, prescribed burning, declining habitat restoration, riparian forest buffer, **roof runoff management**, **sediment basin,** sinkhole treatment, spring development, **stream bank and shoreline protection**, strip cropping, **water control structure**, drain tile for waterways, terrace, **tree/shrub establishment**, underground outlet, upland wildlife habitat manag., veg. barrier, waste facility cover, **wastewater and feedlot runoff control, water and sediment control basin,** watering facility, livestock well, **well sealing, wetland restoration, windbreak, windbreak renovation.** (Practices in bold are most applicable to the Seven Mile Creek Watershed.)

NOTE: In some cases funds from local SWCDs and watershed projects can boost cost share rates from 50% to 75% and provide additional incentives. To learn more contact your local NRCS or watershed project.

FILTER STRIP AND WETLAND RESTORATION STATUS

One of the main goals of the Seven Mile Creek project has been to increase the voluntary enrollment of small wetland restorations and filter strips under the Conservation Reserve Program. To increase the interest in the programs, the watershed project has been offering special incentives such as $35-$75/acre/year bonuses, 100% installation cost-share and coordinating the seeding and maintenance of CRP target areas. The only thing the landowner has to do is come in and sign-up. In the watershed a total of about 1,000 acres are eligible through these special programs. The watershed project has set a target goal of 500 acres. We have a good start on this effort and this past year over 120 acres were signed up by six different landowners equaling about 25% of the goal. **Thanks again to all those landowners that have committed a portion of their land to a conservation legacy.**



Landowner	Filter Strips (CP 21)	Wetland (CP 27)	Wetland Buffer (CP 28)	Total
1	3.6	5.0	14.7	23.3
2	4.9	5.0	15.2	25.1
3	3.5	5.0	15.0	23.5
4	5.9	5.0	15.0	25.9
5	0.5			0.5
6		18.0	8.0	26.0
Total Acres	18.4	38.0	67.9	124.3

Left. Seeding of filter strip along Seven Mile tributary in November. Right– wetland restoration two months after completion in July.

ROCK INLET COST-SHARE

Interested in replacing your open tile intake with a rock inlet? This may be the best time to do it. The Nicollet SWCD along with the watershed project has agreed to provide 75% cost-share up to $300 per open intake replacement. Out of pocket costs per intake for the landowner has been around $38-$75 per intake replaced after cost-share. Cost-share is on a limited basis. Contact Kevin Ostermann of the Nicollet SWCD or the SMC Watershed Project at 507-934-4140.

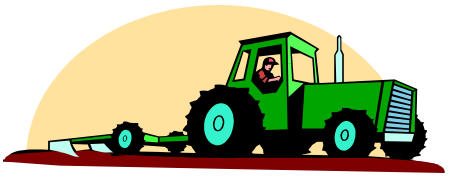
Advantages of a rock intake over an open intake

- Have a larger capacity to drain—on average a rock inlet has 10x more drainage capacity (porosity) than a 4" standpipe (Carver Co.)
- Recent research indicates rock inlets can remove up to 50% sediment and particulate phosphorus before reaching the tile lines. (UMN)
- Convenience-rock inlets are easier to farm around since standpipes are removed.

Farm Practice Survey Results for the Watershed

This past year about 20 farmers were surveyed within the Seven Mile Creek Watershed. The focus of the survey was to gather information on current nutrient, tillage and pesticide use on farms within the Seven Mile Creek Study Area. The purpose of the study was to 1) help determine realistic water quality goals by documenting current practices 2) Use information as a "benchmark" to measure the effectiveness of the watershed project 3) use information to help model what impact selected BMPs will have on water quality 4) help watershed managers identify current environmental stewardship practices and future conservation needs. Information that was collected:

- Timing, rates and method of applications were collected for all nitrogen (N), phosphate (P2O5) and potassium (K_2O) inputs (fertilizers, manures and legumes);
- Pesticide information;
- Soil and manure testing results were collected if available;
- Tillage practices.



Thanks again to all those that participated!

2002 Crop Year Survey Summary (Adopted from MDA FANMAP Report)
Approximately 60% of the crop acres within the SMCW were inventoried. Field corn and soybeans were the dominant crops with 93% of all acres planted to these crops. Forty-two percent (42%) of the crop acres were planted with field corn and 92% of the 700,000 pounds commercial N was applied to those field corn acres. Eighty-one percent (81%) of all N applied was during fall applications. Anhydrous ammonia and urea accounted for 77% of N applied to field corn and for 93% of the fall applied N to field corn. Nitrogen inhibitors were applied with fall applications of N, and 51% of field corn acres applied with anhydrous ammonia used nitrogen inhibitors.

Field corn accounted for 84% of the commercial P fertilizer applied to inventoried acres. Fall applications of commercial P accounted for 54% of the P applied with starter and preplant applications accounting for the other 37% and 9%.

Livestock in the SMCW was dominated by hog operations with the balance from dairy. Manure N (first year available) from hogs accounted for over 75% of manure N applied. All hog manure was in the liquid form and injected while all dairy manure was in the solid form and broadcast. Manure was applied on 732 acres of corn and 20 acres of alfalfa. Fall applications of manure accounted for 61% of the manure N applied. Manure N accounted for 10% of all relative N contributions with legumes and commercial N accounting for 17% and 82%, respectively. Soybeans were the dominant source of legume N credits accounting for more than 99% of all legume N credits.

On average, inventoried farmers were over-applying N by 23 lb/A and 37% of the corn acres were over-applied by more than 30 lbs. On manured acres, 32% of the acres were over-applied by more than 30 lbs. In regard to phosphorus, 71% of the soil tests were in the high or very high range. Phosphorus applications account for slightly less than ½ of the P needed for crop removal. However because a large percentage of the soil tests were in the very high range there may be an opportunity for additional reductions on those fields.

Tillage practices were quite consistent across the inventoried farms with 68% of the acres planted to corn receiving fall chisel and spring field cultivator tillage and 86% of the acres planted to soybeans receiving fall disk-ripper and spring field cultivator tillage. Pesticide use was prevalent in the SMCW, as 99% of all crop acres were applied with herbicides or insecticides.

Pesticide use consisted of 35 different formulas. There were 27 separate compounds of active ingredient used in these pesticide applications, totaling 22,000 pounds of active ingredients. Field corn and soybeans accounted for 52% and 44% of all AI applied. Atrazine and mesotrione were the most used compounds on corn by acres covered and EPTC and acetochlor account for the most lbs applied with 38% and 18% of all AI, respectively. Glyphosate was the most used compound on soybeans accounting for 67% of all AI applied and was applied on over 90% of all soybean acres. It also appears all applications of pesticides are at or below recommended rates for both rates per application and total AI allowed per year.

Inventoried farmers in the SMCW appear to be a fairy homogeneous group with many of the practices consistent across the watershed. It also appears that tillage, pesticides and nutrients are closely tied together in this watershed. Therefore, any changes in one area may affect changes in the other two, thus some educational efforts would need to take into consideration the current "package" of practices that farmers are currently using.

Some very positive results were discovered through this study. There is strong evidence that producers are voluntarily adopting the educational materials and recommended N management strategies developed by the UM for the SMCW, especially in regard to manure crediting. However, overall reductions in N can still be achieved with little chance of economic loss in the long term. It is also evident that promotional activities need to continue and be specifically targeted to deliver the most recent advances in technology and revised N management and UM recommendations for the area.

Seven Mile Creek Watershed Project

Seven Mile Creek
Watershed Project
BNC Water Quality Board
322 So. Minnesota Avenue
St. Peter, MN 56082

WATERSHED WEBSITE

Want to learn more about what's happening in your watershed? A new website was recently created to highlight conservation and water quality related activities within the Seven Mile Creek Watershed and surrounding areas.

http://mrbdc.mankato.msus.edu/org/bnc/index2.html

Website Features

- ⇒ Up-to-date information on water quality projects and programs.
- ⇒ Highlights farmer conservation stewardship and conservation practices.
- ⇒ Download recent three-year nitrogen rate study to determine which rate maximizes yields and profits.
- ⇒ Download past newsletters and publications.
- ⇒ Take a "virtual" tour of the Seven Mile Creek Watershed.
- ⇒ Download brochure and map of Seven Mile Creek County Park.
- ⇒ See the historical loss and gain of wetlands in the watershed since the late 1800s.
- ⇒ Learn more about Red Top Farms agronomy and water quality research
- ⇒ More! Much, much, more.

WATERSHED AWARENESS SIGNS

Wondering where the Seven Mile Creek Watershed is? To help increase the awareness of the watershed boundaries, a total of seven "Entering Seven Mile Creek Watershed" signs were installed along major roads entering the watershed this past fall.

Seven Mile Creek Watershed Project
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