



Our Mission

The Sherburne Soil & Water Conservation District is dedicated to working directly with landowners and agencies in order to promote the wise and sustainable use of our land and water related resources; to educate and inform the public about these uses; to help solve the resource problems within the District and to serve as a county wide natural resource information referral center.



Sherburne Soil & Water Conservation District
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www.sherburneswcd.org



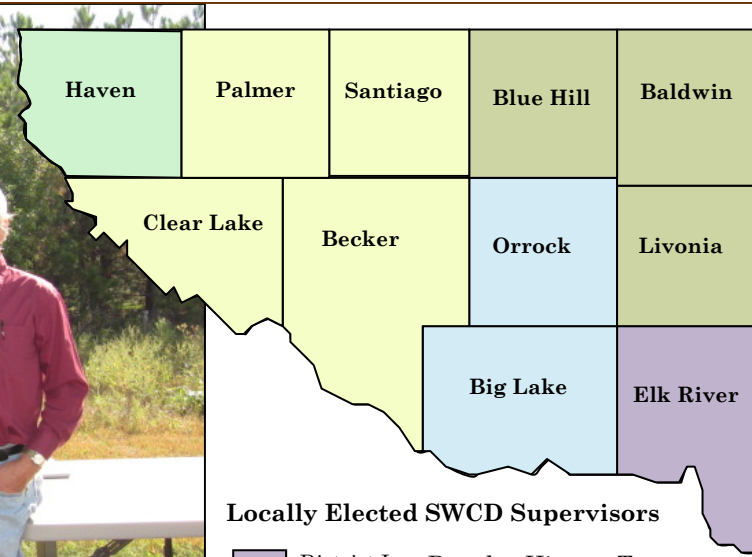
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SWCD SUPERVISORS & STAFF & NRCS STAFF



- Locally Elected SWCD Supervisors**
- District I Douglas Hipsag, Treasurer
 - District II David Berg, Reporter
 - District III Larry Goenner, Chair
 - District IV Jason Selvog, Vice Chair
 - District V Roger Nelson, Secretary

From Left: David Berg, Jason Selvog, Larry Goenner, Doug Hipsag, Roger Nelson



Left:
Miranda Wagner, Soil Conservation Technician

Right:
Mary Monte, District Conservationist

Back:
Tiffany Determan, Water Resource Specialist, Frances Gerde, District Aide and Francine Larson, District Manager

Front:
Bill Bronder, Resource Conservationist and Gina Hugo, Resource Conservationist



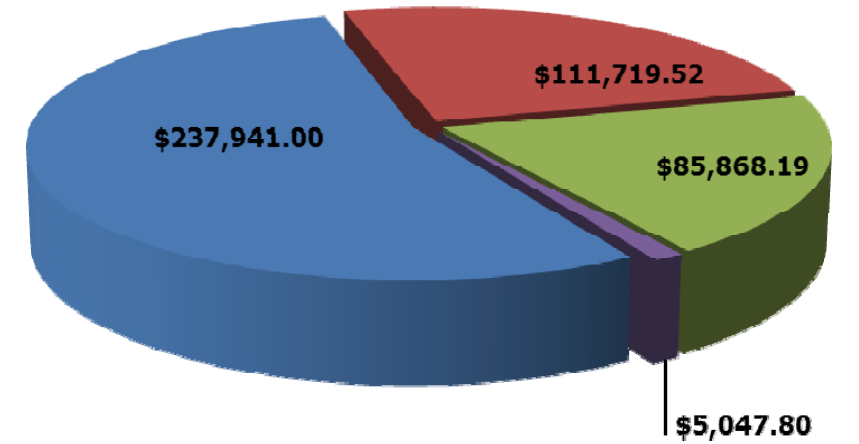
2012 FINANCIAL SUMMARY

The Sherburne Soil & Water Conservation District finances its day-to-day operations through a variety of revenue sources. These sources include County, State, charges for services and miscellaneous sources. In 2012 our total revenue was \$440,576.51. Although governed by an elected board of officials, Conservation Districts do not have levy authority and must secure funds from many sources to maintain programs and services. As indicated to the right, Sherburne SWCD's primary funding source is through county allocations.

Note: Intergovernmental - County includes state pass-through revenues.

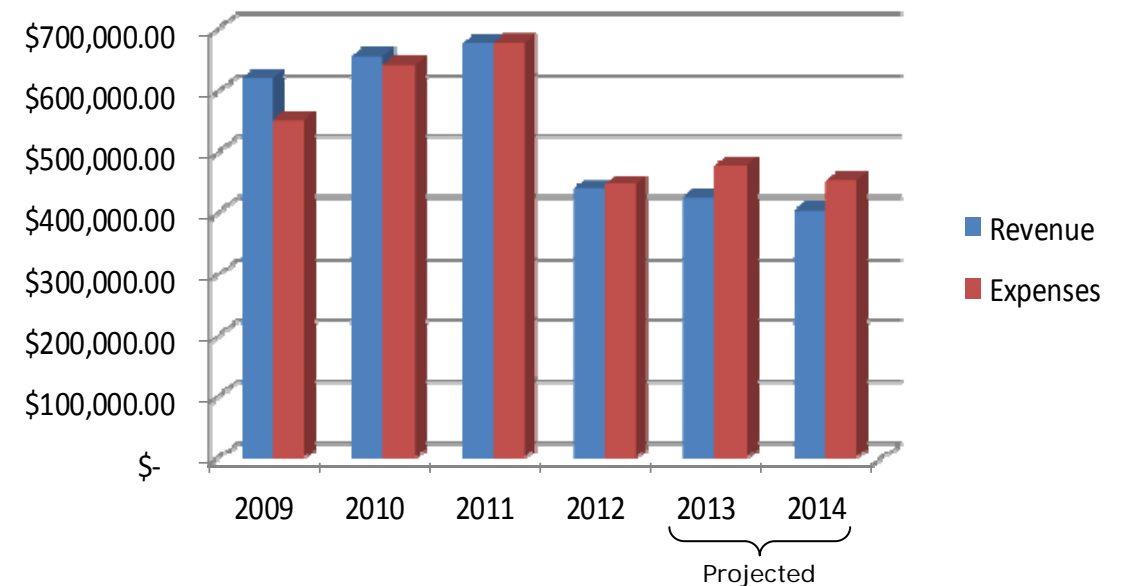
Sherburne SWCD's expenditures include personnel & operating expenses, District, State and Federal program expenses and other related expenses. 2012 marks a significant decrease in both revenue and expenditures.

Sherburne SWCD - Revenue Summary Total Revenue in 2012 was \$440,576.51



- Intergovernmental - County (72%)
- Intergovernmental - State (55%)
- Charges for Service (19%)
- Miscellaneous & Other Income (1%)

Revenue & Expenses 2009 - 2014



SHERBURNE SWCD SERVICES

There are fees associated with some of the services we offer. Please contact our office for more information

- Tree Planting
- Prairie Restoration/Planting
- Pasture Restoration/Planting
- Annual Tree Sale
- Forest Stewardship Plans
- Wetland Delineations
- Rotational Grazing Plans
- Pasture Management/Seeding Plans



Tree Survey Team



Tree Planting



Gravel Bed Construction



Water Quality Monitoring

2013 ACCOMPLISHMENTS AT A GLANCE

Education and Outreach

- Education Events Attended: 3
- Education Events Hosted: 4

Forestry

- Trees Sold: 20,000
- Trees Planted: 22,000
- City Tree Surveys Completed: 5
- Forest Stewardship Plans: 5
- Acres of Invasive Species Removed: 10



Shoreline Restoration

- Lakeshore Restorations: 6
- Total Linear Feet: 1,711
- Total Square Feet: 15,150



Water Quality

- Sites Monitored for Bacteria: 4
- Miles of River Cleanup: 6

Wetland Conservation Act (WCA)

- Wetland Delineations: 22



Forestry

Community Tree Inventory

In 2012 during the planning process, five communities in Sherburne County agreed to have a tree inventory completed during the summer of 2013. This detailed inventory can be used to formulate effective management plans for tree care in each community. Also understanding the tree population and its differing species will help managers prepare for possible catastrophic events.

Volunteers in each community met for 2 days of training. Once the inventory began, groups of volunteers went from property to property in selected neighborhoods to gather information on the tree populations.



Volunteer measuring the diameter of the tree.



Volunteers measuring the crown width



Volunteer training session



Tree Fabric Installation

On a rainy day in June, the Chippewa SWCD brought their tree fabric installation machine to Sherburne County. The machine installs a 6' wide plastic fabric. Using a plastic fabric to control weeds in tree and windbreak plantings is a common practice in the western part of the state where there is less rainfall. The landowners first prepared the sites and the District planted 1200 Norway and White pine transplants. As the fabric is being installed, a slit is cut out for the trees. We installed 17,000 linear feet of fabric which should reduce weed competition and improve survivability.

Tree Health Inspections

In 2013 89 tree and woodland health consults were completed on residential properties. Most of the issues found were oak wilt, needle cast diseases on spruces and pines, and winter stress leading to mortality.



Rhizosphaera needle cast



Oak wilt symptoms



Gina Hugo on horseback to cover more ground in a woodland property

EDUCATION AND OUTREACH

National Pollinator week

June 17th-23rd was national pollinator week. The SWCD hosted an open house at the Sherburne History Center to educate those interested in learning more about the importance of pollinators. Guided prairie walks, pollinator friendly snacks, and an interactive native plant roots display were just some of the education tools used to illustrate the importance of pollinators. A self guided tour of residential prairies was also offered during national pollinator week.



Mark and Jan Lefebvre participated in the self-guided prairie tour coordinated by the SWCD. Lefebvre's were 1 of 8 prairie owners that welcomed visitors during a set time frame to come and tour their native prairie.

Cub Scout Tree Planting

On a rainy Saturday morning 7 scouts and their leaders gathered at the County Sheriff's storage facility in Orrock Township. The scouts planted over 200 trees along the perimeter of the fence to provide privacy.



Environmental Education Days

The Sherburne National Wildlife Refuge hosted the annual environmental education days on September 24-26th. The Sherburne SWCD presented information at the groundwater and watershed models for a part of the event.

Watershed Cleanup

Twenty volunteers braved the unfavorable weather to lend a hand in the annual Elk River Watershed Cleanup. The group met at Lakeside park this year to enjoy coffee and light snacks before splitting into groups to head out to various locations along the Elk River. After only two hours the group collected over 500 pounds of garbage just at the bridge crossings in Palmer Township, Orrock Township, Becker, and Big Lake. Among the usual suspects of garbage some interesting items found were a dehumidifier, very old bike, file cabinet and couch cushions.



EDUCATION AND OUTREACH

Meeting Clean Water Goals for Sherburne County - Workshop



The SWCD with assistance from U of M Extension Service held a workshop for elected officials and local decision makers on October 24th, 2013. Over 30 participants attended the hands on workshop, which included presentations on land use impacts on clean water, shoreland ordinances, and a interactive watershed game. The workshop was concluded with an inspiring presentation by Darby Nelson, Author of: *For Love of Lakes*.

Participants included members of several townships, City and County staff, County Planning Commission, Water Plan Committee and SWCD staff. The Sherburne SWCD with advise via the water plan advisory committee, plans to continue with efforts to provide relevant education to local decision makers and elected officials in future years.

Diagnostic Symptoms



"D" shaped exit holes



EAB Adult



EAB Detection Workshop for Local Utilities

The SWCD partnered with the Cities in Sherburne County (Becker, Big Lake, Elk River, St. Cloud, Princeton and Zimmerman) to host a training opportunity for over 50 public works employees and local utility professionals. The free, one-hour seminar aimed to develop early recognition techniques to mitigate the effects of the emerald ash borer (EAB) when it enters the area. Mark Abrahamson of the MDA's Plant Protection Division held the participants attention with great photos and tips for recognizing signs and symptom of EAB in the field.



Briggs Lake Chain

Each spring, for nearly 10 years, the SWCD has partnered with the BLCA Healthy Lakes Committee to educate the interested residents about different types of restoration projects, plants, strategies and grants to help protect the lakes and area wildlife.

Prairie Day 2013

Every other year at Prairie Restorations, Inc. a day is dedicated to celebrating prairies and all that they provide. The SWCD was there to promote our native planting programs. Around 800 visitors came to speak with various vendors and listen to presentations.

FORESTRY

Gravel Bed

The Sherburne SWCD constructed a gravel tree bed in the spring of 2013. The gravel tree bed nursery is used to hold bare root trees from spring until fall planting. The purpose of this hold time is not to grow the trees; rather to enhance their root systems. Gravel beds are not complex and have been used in the nursery trade for decades. It is simply contained hydrated pea gravel in which bare root trees are temporarily held.



Five different species were planted: Honeylocust, Kentucky Coffee Tree, River Birch, Princeton Elm, and Hackberry

The benefits of gravel bed held trees:

The benefits of gravel bed held trees:

- Cost savings** - up to 50-75% less expensive than potted or balled and burlap (B&B) trees
- Increased survival** - fibrous root system increases trees ability to absorb water and nutrients
- Planting times** - being held over summer allows for planting in fall which is optimal
- Visible root structure** - able to prune precarious roots before tree is planted
- Ease of planting** - bare root trees are significantly more light weight than potted or B&B trees

Community Tree Planting

Starting in early October the SWCD staff along with a handful of volunteers began planting the gravel bed trees into the communities that completed the tree inventories over the summer. Each city received 9 or 10 trees and were planted in parks and in city right of ways. Thank you to all of the volunteers and city employees that made the planting days so successful!



Zimmerman - Maefield Park



Princeton



Honeylocust



Big Lake - Lakeside Park

WATER QUALITY

Briggs Lake Chain Partnership

Past work has set the quality of the Briggs Lake Chain as a priority for the SWCD. We continue to show support assisting Briggs Lake Chain Association (BLCA) with their annual Shoreline and Stormwater Reduction workshop and by attending ground-truthing (essentially an on-site validation of concerns identified in the examination of aerial images) activities such as winter sampling and individual property assessments. The SWCD followed up with site visits to 11 properties to make recommendations on best management practices and/or collect a soil boring to identify the cause of "hot spots" in infra-red aerial photographs. Most recently the SWCD submitted a Clean Water Fund Community Partners Grant which will route grant funds through the BLCA to assist with offsetting costs associated with stormwater reduction practices.



Birch Lake Subwatershed Assessment

A detailed assessment of the direct drainage area of Birch Lake was completed in 2013 with Clean Water Funds which were granted to the Metro Conservation District in 2013. The assessment is the third of its kind completed in the County. Two prior assessments lead to the implementation of 30 neighborhood raingardens in St. Cloud and several retrofits coinciding with redevelopment plans in Elk River.

The Birch Lake assessment recommends locations for placement of Best Management Practice retrofits that address meeting water quality standards set for Birch Lake. Potential projects are organized from most cost effective to least, based on cost per pound of total phosphorus removed. Priority practices include stormwater runoff reduction (i.e. rain gardens and infiltration) developed areas, lake shore restorations and potential passive phosphorus removal practices such as iron-enhanced sand filters placed east and north ditched inlets. The full report can be viewed on the Sherburne SWCD website.



Example of southwest catchment- Best locations for Bioretention are identified.

VARIOUS SWCD ACTIVITIES

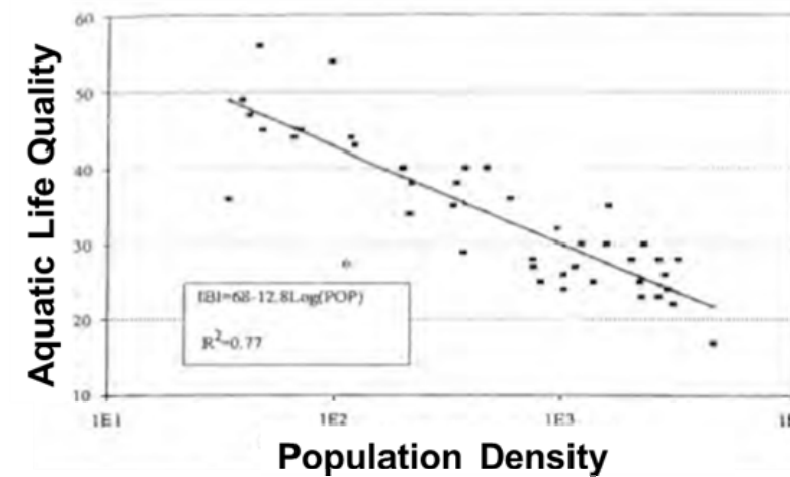
Sherburne County Water Plan Advisory Committee

The purpose of the Water Plan Advisory Committee is to advise the county on implementation priorities identified in the Local Water Plan. The committee is composed of a board member each of the SWCD and County as well as eight members at large from varying backgrounds.



Countless accomplishments have taken place because of the guidance and support provided by the committee including: coordination of pollution reduction programs focused at the Elk River Watershed, numerous educational workshops and installation of shoreland restoration and

stormwater reduction practices using funds granted based on references to the Water Plan. Most recently the Water Plan committee identified education of local decision makers and leaders on the impacts of land use change and stormwater runoff on lake and stream water quality. This priority was based off of projections of rapidly growing populations and development pressure due to the close proximity of Sherburne County to the twin cities metropolitan area and transportation corridors.



Native Buffer Summary

The native buffer grant has come to a close. Over 37 prairies were either planted or enhanced for a total acreage of 237. Enhanced prairies were burned and followed by an over seeding of a 25 species local ecotype forb mix.



VARIOUS SWCD ACTIVITIES

2013 Tree Sale

The extended winter forced the SWCD staff to postpone the tree sale by two weeks this year. Despite the late start all of the tree orders were well received. A total of 20,000 trees were purchased during the tree sale.



Conservation Corps Intern

The Sherburne SWCD was fortunate enough to receive another Conservation Corps Intern for the summer of 2013, Patrick Landisch. This was the third summer utilizing the Conservation Corps resources, which have been indispensable. Patrick assisted with lakeshore restorations, community tree surveys, wetland delineations, water quality monitoring, and invasive species control. The SWCD plans to send an application to receive a Conservation Corps intern for the summer of 2014.

Phase II St. Cloud Raingardens

Due to the success of Phase I in 2011 a second round of funding was applied for to start on Phase II. This year was spent on prioritizing project locations. Letters were sent to properties that would be suitable sites for a raingarden, interested landowners were asked to attend an informational meeting with the City of St. Cloud and the Sherburne SWCD. Installation for the 15 raingardens will take place next spring.



Good Pasture Management



Poor Pasture Management



Pasture Management Program

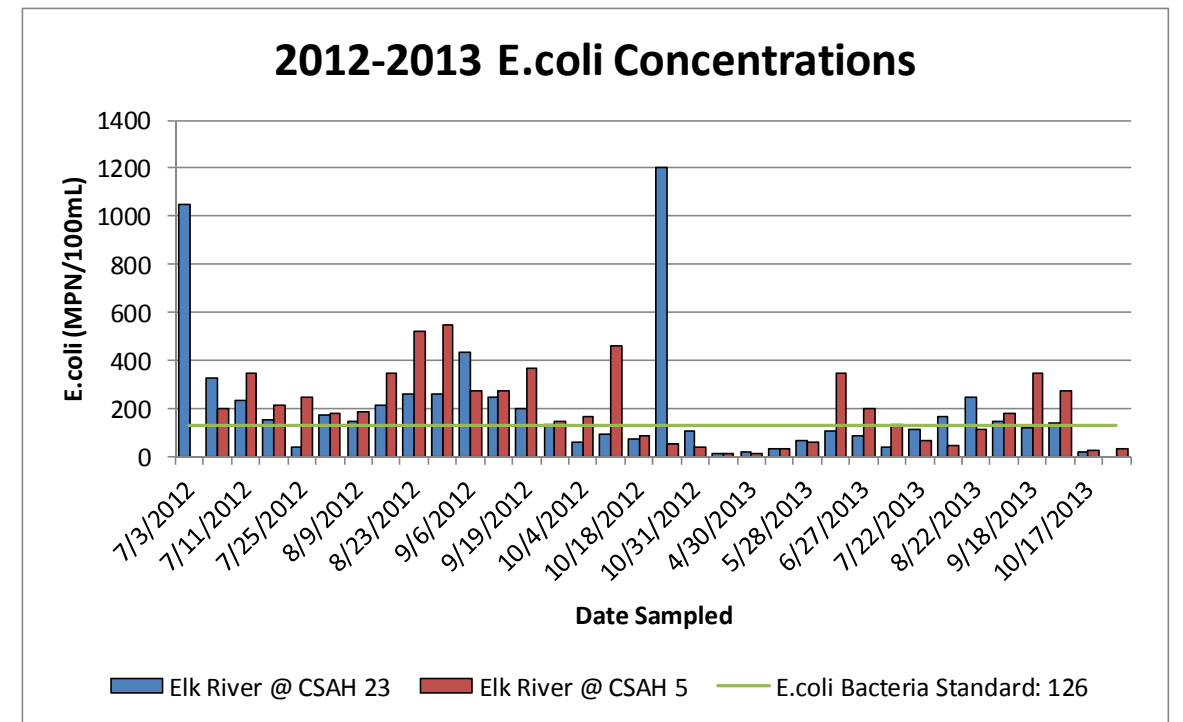
This past year, the District instituted a Pasture Management Improvement Program directed toward horse owners with small acreages. Due to a lack of equipment and space, these pastures are frequently overgrazed leading to soil erosion and water quality problems. Under this program, the District works with landowners on ways to improve their pasture through better management, rotational grazing, and forage selection. In 2013, we worked with 7 horse owners and re-planted 3 pastures to improve forage production.

WATER QUALITY

Elk River Bacteria Total Maximum Daily Load-Update

After completion of the Elk River Bacteria TMDL in 2012 the SWCD continued monitoring bacteria at two locations along the Elk River to oversee long term trends and response to bacteria reduction practices recommended in the TMDL. Practices that were recommended included large animal pasture and manure management (in riparian areas) and septic system upgrades. To this point bacteria continues to exceed levels that are safe for aquatic recreation, particularly during dry weather. For more information on the Pasture and Manure Management Program initiated as a result of this work refer to page 14.

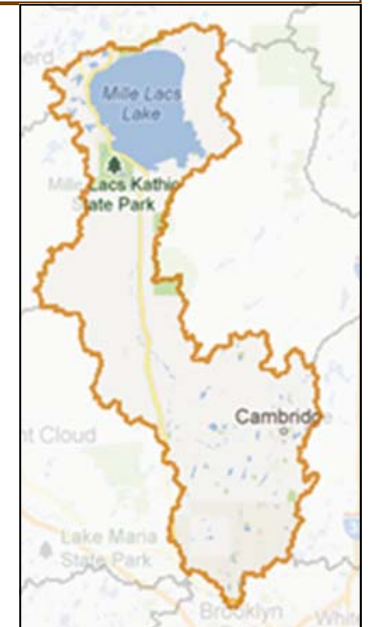
2012-2013 E.coli Concentrations



Rum River Watershed

Sherburne SWCD began subcontracting with Anoka Conservation District early in 2013 to provide assistance with the Rum River Watershed Restoration and Protection Project (WRAPP). Since a section of the Rum River Watershed covers the eastern side of the County, and the SWCD has experience in the WRAPP process, via the Mississippi River (St. Cloud) Watershed Project, staff is able to provide insight, using past experience, into many aspects of the project.

This project joins efforts of nine counties, tribal interests and state agencies. The Rum River WRAPP will be completed in 2016 and upon completion, will steer management of the entire Rum River watershed.



MAJOR WATERSHED RESTORATION AND PROTECTION PROJECT

Coordinated efforts to protect and restore water quality in the Mississippi River (St. Cloud) Watershed continued to make headway in 2013.

Stream Health Assessments

In addition to lake and stream health inventories that were completed in 2012, watershed partners investigated the root causes of poor fish and invertebrate health in the St. Francis River, Battle Brook, and the Elk River (Sherburne County Waters listed only). The primary recommendations to improve stream health and therefore habitat for fish and invertebrates includes: livestock and large animal exclusions from streams (minimum 50 foot buffer to allow stream banks to vegetate and stabilize); Buffers along ditches, two stage ditches, remaindering channelized stream reaches, and wetland restorations.

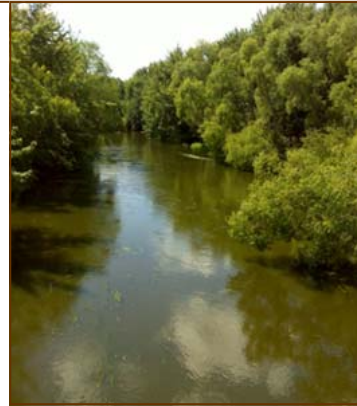


Figure 1 poor assemblages of aquatic life in the Elk River are related to high phosphorus concentrations due to runoff from pasture and row crops upstream.

The full Report can be found at: <http://www.pca.state.mn.us/hqzqdd6>

Civic Engagement

The Watershed Community Leaders group served their communities by expanding their current knowledge base, passing new knowledge onto other citizens within their community and providing feedback (based on community values) to watershed partners. Three tours were held so far in 2013 including tours of the St. Cloud Drinking Water Treatment Plant, Elk River Wastewater Treatment Plant, and a tour of practices in the Wright County portion of the Watershed.



Figure 2 Community Leader Kevin Beadles hosted a tour of the Elk River Waste Water Treatment Facility

The Mississippi River (St. Cloud) Watershed Partners also hosted a Watershed Wide Community Event at the Clearwater Township Hall to share information and exchange ideas. Fifty-seven members of the watershed community stopped by to converse.



Figure 3 Joe Jacobs (Wright SWCD) gave a tour of water quality improvement practices in Wright County on August 26th.

What's Next?

The Watershed Partners are working together to summarize the gamut of work completed into one document which will identify which lakes and stream are in need or restoration (unhealthy), which are in need of protection (healthy) and the most likely ways to improve or protect the quality of water. This work will be complete by June 2014, a Watershed Community Event will be held to showcase the hard work that has been put into this project which was locally led and initiated by the State. Most importantly, watershed partners are having conversations about how to work cooperatively to address the priority's identified in the final Watershed Report.



Figure 4 Conversations and interactive learning at the March Watershed Community Event.



USDA-NATURAL RESOURCES CONSERVATION SERVICE (NRCS) PROGRAMS

2013 Highlights Sherburne County USDA Natural Resources Conservation Service (NRCS)

- Technical assistance provided to agricultural producers requesting approximately \$54,000 to install conservation practices on their land.
- Conservation plans written on 2,295 acres.
- Practices applied in fiscal year 2013 to improve soil quality (738 acres); water quality (849 acres); irrigation efficiency improvement (271 acres); fish and wildlife habitat (235 acres); and forest land improvement (132 acres).
- An example of some of the conservation practices applied: irrigation water management, well sealing, field borders, field windbreak, and cover crop.



Miranda Wagner in a cover crop field



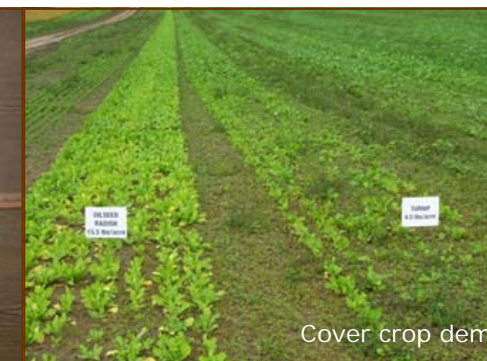
Steven Pignato, Earth Team Volunteer



Mary Monte presenting information about high tunnel



Purple Topped Turnip and Tillage Radish®



Cover crop demonstration plots



GREEN MANURE MIX (soybeans/radish) 67 lbs/acre



Preparing for cover crop seeding



Seasonal High Tunnel tour hosted by NRCS and MN Extension



Seasonal High Tunnel

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USDA-NATURAL RESOURCES CONSERVATION SERVICE (NRCS) PROGRAMS

- Natural Resources Conservation Service (NRCS) can provide technical assistance to address most natural resource concerns on your land. In addition, financial assistance may also be available.
- NRCS has directed almost \$23.7 million in financial assistance for fiscal 2013 to help Minnesota producers implement conservation practices through the Environmental Quality Incentives Program (EQIP), the agency's largest Farm Bill conservation program. This \$23.7 million conservation investment helps improve environmental health and the economy of Minnesota's rural communities.
- In just four years, America's top conservationists have enrolled 50 million acres in USDA's Conservation Stewardship Program (CSP), a program that helps farmers, ranchers and forest landowners take conservation to the next level.
- From improving soil health to sending cleaner water downstream, this program is improving the environment, including the landscape here in Minnesota. Landowners in Minnesota have enrolled 659,351 acres into CSP.
- A CSP self-screening checklist is available to help producers determine if CSP is suitable for their operation. The checklist highlights basic information about CSP eligibility requirements, stewardship threshold requirements and payment types. It is available from local NRCS offices and on the CSP website: <http://go.usa.gov/g9dx>.
- Wildlife Habitat Incentive Program (WHIP) can develop or improve wildlife habitat on privately owned land through installation of in-stream structures, providing brush management and control of invasive species. Almost any type of land is eligible, including ag and non-ag lands.

Outreach Activities in Fiscal Year 2013

- Season High Tunnel Workshop
- Cover Crop Demonstration Project
- 8th Annual Immigration & Minority Farmers Conference
- Midwest Poultry Federation Convention
- Irrigators/Corn Grower Annual Meeting
- Rum River Kick-Off event
- Presenter at Plant Materials Center for Extension Professional Development Tour
- Presenter at Elk River Rotary Club
- FSA- Tribute to Agricultural Day

Plane used to aerial seed cover crop into standing corn



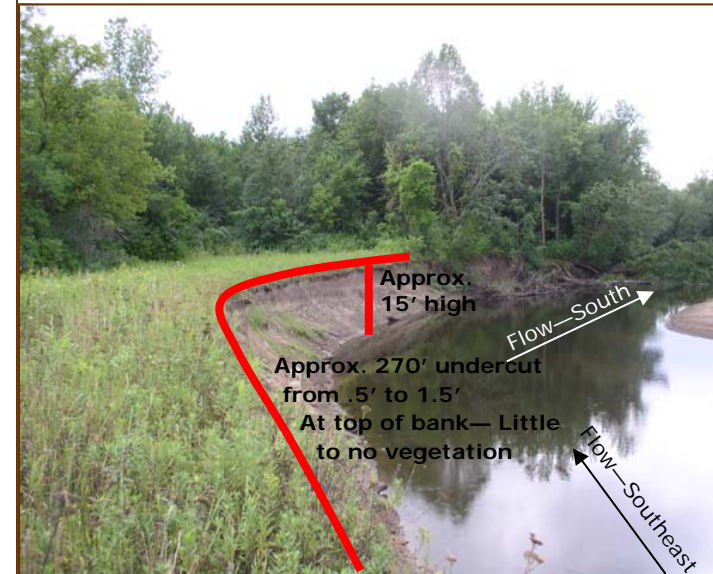
Aerial seeded cover crop



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2013 CONSERVATION COOPERATOR

Andy and Roxanne Schreder Rum River



The Sherburne District has selected Andy and Roxanne Schreder and family as the 2013 Outstanding Conservationists. In 2011, with assistance from Clean Water grant funds, the Schreders installed 4 rock stream barbs that direct the Rum River's current away from the bank protecting 520 linear feet from further undercutting and erosion. It is estimated that this bank has been eroding 2 feet per year for the last 40 years. To further protect their bank, they also maintain a vegetative riparian buffer.

Stream Barb and cedar revetment 2011



PROJECTS ON THE GROUND



PROJECTS ON THE GROUND

