**Soil Health**

Soil quality, also referred to as soil health, is defined as how well soil does what we want it to do. Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes.

**Soil health matters because:**

1. Healthy soils are high-performing, productive soils.
2. Healthy soils reduce production costs—and improve profits.
3. Healthy soil protect natural resources on and off the farms.
4. Franklin Roosevelt’s statement, “The nation that destroys its soil destroys itself,” is as true today as it was 75 years ago.
5. Healthy soils can reduce nutrient loading and sediment runoff, increase efficiencies, and sustain wildlife habitat.

**What are the benefits of healthy soil?**

1. Healthy soil holds more water (by binding it to organic matter), and loses less water to runoff and evaporation.
2. Organic matter builds as tillage declines and plants and residue cover the soil. Organic matter holds 18-20 times its weight in water and recycles nutrients for plants to use.
3. One percent of organic matter in the top six inches of soil would hold approximately 27,000 gallons of water per acre!
4. Most farmers can increase their soil organic matter in three to 10 years if they are motivated about adopting conservation practices to achieve this goal.

Information from: www.nrcs.usda.gov
Does the weather have you thinking that you might need manure storage or that you have a gully in your field or water running off of your feedlot site? Would you like free engineering and technical assistance to help? And up to 75% cost share?

If you are interested, Todd SWCD will be applying for Clean Water Legacy funds in August to assist landowners install practices that protect and improve water quality by controlling soil erosion and reducing sedimentation. Possible projects include: terraces, sediment basins, filter strips, and Ag waste ponds. Please contact Ed, Greg or Andy at 320-732-2644 to learn more and to have the SWCD apply for funding for your project!

No work can start until your project has been approved.

3% Low-Interest Loans
Project examples include but aren’t limited to: Replacing existing individual septic systems, Ag waste systems, erosion control projects, conservation tillage equipment and relocation of wells.

As with all AgBMP Loans, there must be an existing problem and the project must have a direct impact on improving or protecting water quality. No work can start until your application has been approved.

Contact Todd SWCD for an AgBMP loan application. 320-732-2644

Low Income Cost Share Funds
Todd County Planning & Zoning has funds available to help replace open-end septic systems or noncompliant septic systems. Preference for funding will be determined based on income status, condition of existing system, and proximity to priority surface waters. Successful applicants will have from 75% to 85% of replacement septic system costs covered by the program.

To see if you qualify or for more information contact the Planning & Zoning office at 320-732-4420.

NEW 2013 Full Color Todd County Plat Books
$35.00
(Add $6.00 for shipping if you want it mailed to you.)

To place your order- send payment to or stop in:
Todd County GIS
215 First Avenue South, Suite 102
Long Prairie, MN 56347
320-732-4248

Irrigation Scheduler Management Program
In the interest of sound irrigation management, the Todd, Wadena and Hubbard SWCDs are offering an “Irrigation Scheduler Management Program” that is designed to give the farmer a second opinion on in-field soil moisture status that can assist the farmer in making the decision on when to irrigate. The program uses local weather data to calculate the evapotranspiration (ET) rates for all of the major agricultural crops grown in the area. That information, along with rainfall and irrigation information for a particular cropped field, is then entered into the program to track the soil moisture.

Wade Salo was hired to work with landowners on irrigation water management. Salo, a 2012 University of Minnesota-Crookston graduate, served as a Conservation Apprentice during the summers of 2011-2012 at the East Otter Tail SWCD before being hired for the new position.

If you have questions, call Wade at 218-631-3195 ext. 4 or stop in at the Wadena SWCD.

This summer, the Todd SWCD has an Conservation Corps Apprentice, Robert Cress, who will be helping them conduct a knowledge, attitude and perceptions (KAP) study on five area lakes: Latimer, Long, Mound, Little Birch and Pine Island. Robert joined the SWCD as of May 27th, 2013 and began the survey on June 10th and should be completed by early August. This survey will provide the SWCD with valuable information to help improve the lake for all property owners and visitors. Information gathered will also allow the SWCD to design and refine education and outreach strategies to local needs. Lakes were chosen for the study based on lake association involvement, monitoring data and location in the county and participation in past conservation projects. Once the study is completed Robert will be assisting on a Lakeshore Challenge similar to the DNR’s Score your Shore and other District projects and activities.

Robert is originally from Spring Lake Park, Minnesota and is currently on summer break from Bemidji State University where he is obtaining his bachelor’s degree in Aquatic Biology. He will be graduating in the Spring of 2014. He hopes to obtain a job as a field biologist when he is done with school.
Partnering Across County Lines

Todd and Morrison Soil and Water Conservation District’s have a long history of working together and partnering on projects to improve water quality in the Long Prairie River Watershed. The Long Prairie River Project south of Motley is a good example of multiple agencies working together for a common cause.

Todd SWCD was contacted by Morrison SWCD’s District Manager, Helen McLennan, inquiring about the 319 funding for the Long Prairie River due to its impaired status and wondering if there would be funds available to help with the eroding river bank south of Motley (pictured at right).

To get the project started, all parties who owned land or would need to give project approval had to meet, agree to the project and come up with the best solution. Land in the project area is owned by Lakewood Health System, Trident Seafoods Corporation and MN DOT. The Natural Resources Conservation Service (NRCS) Area Engineers out of Fergus Falls did the site survey, design and came up with a construction plan involving five rock stream barbs and a hard armored area. Stream barbs are rock structures that extend into the stream to redirect the flow and slow the velocity. During periods of high flows (4th picture down), the stream barbs will be completely submerged, but they will still be working to redirect the flow and allowing sediment to be deposited along the once eroding bank.

Construction on the project started in the fall of 2012 and was completed in early November. A floating silt curtain was used to contain sediment during construction (2nd picture down on right—yellow object in water). The bank was first reshaped at a more gradual slope instead of a steep drop off (2nd picture down on right). The barbs were then strategically spaced at varying angles into the river to divert the current into the center of the river channel and away from the eroding bank. Hard armor was used between the fourth and fifth barbs because of exposed cables and for additional protection of HWY 10. The project used 728 cubic yards of rock and 550 square yards of geotextile fabric underneath. Once all of the barbs and hard armor were in place, the entire area was covered with erosion control blankets to prevent any additional erosion and sediment from entering into the river system during the winter months (3rd picture down on right). The river bank was also seeded with a native seed mixture containing Switch Grass, Indian Grass, Big Bluestem and Canada Wild Rye.

The project cost for this portion of the project was $75,270 with MN DOT contributing $35,000 and Todd SWCD using cost share to fund $40,270. During the winter months the Morrison SWCD worked on designing a riparian buffer plan for the river bank area. They were able to secure funding for the tree planting through the Minnesota Forest Resource Council (MFRC) and the Minnesota Fishing Museum. Students from Pillager and Staples-Motley did the planting of 1,000 trees and shrubs creating a buffer along the top of the bank to further stabilize it (bottom right picture). The MFRC provided funds to the schools for transportation and planting, and the Minnesota Fishing Museum provided the funds to purchase the trees. Lakewood Health System has agreed to water the planting throughout the summer months to ensure survival.

Partners for this project include:

Todd SWCD: Greg Ostrowski, technical advice; Amy Warnberg, grant administration
Morrison SWCD: Helen McLennan, project coordination; Alan Ringwelski and Lance Chisholm, technical advice
NRCS: Scott Smith and Eric Larson, Area Engineers; Steve Girard, engineering technician
MN DOT: Bob Nibbe, engineer; John McNamara, engineering technician
Minnesota Fishing Museum: Jim Lilienthal, representative
Minnesota Forest Resource Council: Lindbergh Ekola, executive director
MN DNR: Tim Crocker and Eric Altena, permitting authority and technical advisors
Army Corps of Engineers: Leo Grabowski, permitting authority
Lakewood Health System: Tim Rice, president
FEEDLOT REGISTRATION

Owners of the following facilities are required to register their feedlot with Todd County:

- Any livestock operation capable of holding 10 or more animal units or a manure storage area capable of holding the manure produced by 10 or more animal units are required to register with Todd County.

Todd County and MPCA rules require the re-registration of all feedlots every 4 years and the deadline for the 4 year cycle is January 1, 2014. Feedlot owners who last registered in 2009 will need to be re-registered. The SWCD will be sending out letters to those feedlots that are required to register this year. There is no cost to register your feedlot. If you have a new feedlot or are unsure if you need to register, contact Ed at 320-732-2644.

CENTRAL SANDS PRIVATE WELL MONITORING NETWORK
NITRATE RESULTS

In the spring of 2011, the Minnesota Department of Agriculture (MDA) began the Central Sands Private Well Monitoring Network with the help of the local SWCD offices and Clean Water Funding. Homeowners from fourteen counties participated in the initial sampling of 1,555 private drinking wells. 88.6% of the sampled wells had nitrate concentrations less than 3 mg/L, 6.8% of the wells ranged from 3-10 mg/L of nitrate and 4.6% were greater than 10 mg/L of nitrate, which is the safe drinking water limit.

Todd County had 137 wells sampled, and 92.7% had concentrations at or below 3 mg/L of nitrate. 5.1% were between 3-10 mg/L of nitrates and 2.2% were above 10 mg/L of nitrates. This data that was collected was used to determine areas of concern and to develop a long term trend network.

This program focuses on nitrates because nitrate is a water soluble molecule that is made up of nitrogen and oxygen. It is naturally occurring in the environment; however at elevated levels it can have negative effects on human health. Although nitrate occurs naturally, it can also originate from man-made sources such as fertilizer, animal manure and human waste. According to a 2007 Minnesota Pollution Control report, nitrate is one of most common contaminants in Minnesota’s groundwater.

Todd SWCD will be holding a free nitrate testing clinic December 2-6 for homeowners with private wells. Listen to the radio and watch the local papers for more information.

REPORT EXAMINES GROUNDWATER SUSTAINABILITY

Are Minnesotans over-using groundwater in ways that could leave us short of water – for human uses and for the environment – in the future? According to a new Freshwater Society report, the short answer to that question is: Yes, in some places across the state.

The Freshwater Society report estimates that total reported groundwater pumping increased by about 2.8 billion gallons per year from 1988 through 2011. That adds up to a 31 percent increase over that period. By comparison, the state’s population increased 24 percent in the same period.

Pumping by city water systems, the biggest single use, increased an estimated 33 percent. Agricultural irrigation, the second-biggest use of groundwater and the fastest-growing use by far, increased an estimated 73 percent during those years.

The 24-page Freshwater report looks at progress being made on groundwater on a number of fronts:

- Greater attention to the connections between groundwater and lakes, streams and wetlands.
- More focus on the precipitation flowing into aquifers and being discharged from them on an annual basis, rather than just the amount of water stored in them.
- Movement by the DNR to consider the cumulative impact on aquifers of existing pumping plus all the well owners lining up to pump from the aquifers.

The report also outlines areas of concern around the state and DNR’s enforcement of laws requiring well owners to get state permits for high-capacity pumping.

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Contact Ed at 320-732-2644 for more information about any of these events please visit our website

Todd County values the protection of our abundant natural resources that have been here for generations and should be available for all future generations. We believe that people come to Todd County and live in Todd County because of the diversity, beauty and availability of our resources.