Elk River Watershed Currents Fall 2008

A one time insert into the Rubbish Review

Vol. 1 No. 2• A Publication of the Elk River Watershed Association • 14 2nd Avenue West Foley, MN 56329

About the Elk River Watershed Association

The Elk River Watershed Association (ERWSA) was formed in 1994 as a result of Local Water Planning efforts in Sherburne and Benton Counties. Concerned citizens identified the water quality of the Elk River and lakes in the Elk River Watershed as priorities for improvement. The two counties determined that a watershed approach would be the most effective way to improve water quality. A Joint Powers Board was formed by Sherburne and Benton Counties for the purpose of coordinating efforts within the Elk River Watershed. The Board of Directors consists of one county commissioner, one Soil and Water Conservation District (SWCD) supervisor and two members at large from each county.

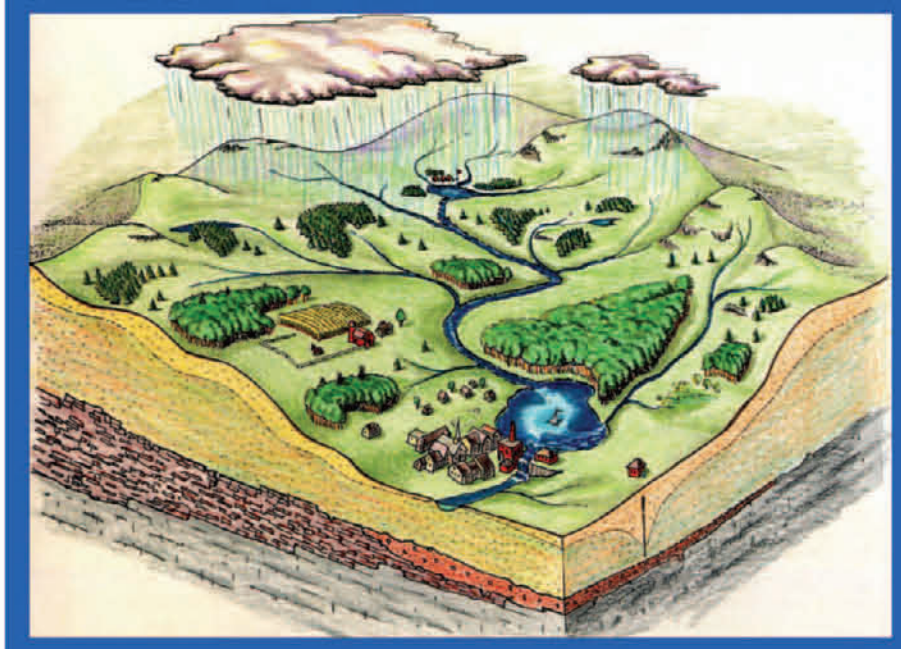
The Elk River Watershed drains 613 square miles. The Elk River and the St. Francis River are major watershed streams. There are also many smaller tributaries, lakes and wetlands within the watershed. Most of the watershed lies within Sherburne and Benton Counties with 17 square miles in Mille Lacs County and a small area in Morrison County. The Elk River has its headwaters in Morrison County and outlets to the Mississippi River at the City of Elk River.

The ERWSA has focused on improving water quality by working with agricultural, urban and residential land owners. The efforts of the ERWSA have resulted in many conservation practices that reduce pollutants to lakes and streams. The ERWSA also funds water quality monitoring and water quality educational programs. Projects are funded through grants and donations.

The Elk River Watershed Association Board of Directors.
From left, Leonard Popp, Benton County member at large; Joe Wollak, Benton County Commissioner; John Riebel, Sherburne County Commissioner; Terry Polsfuss, Sherburne County member at large; Joe Jordan, Benton Soil and Water Conservation District Supervisor, Lee Schlosser, Sherburne Soil and Water Conservation District Supervisor; Brian Kaschmitter, Benton County member at large. Not pictured: Jim Sanford, Sherburne County member at large and Mike Hayes, alternate member at large.

What is a Watershed?

A watershed is an area of land that drains into a lake or river. As rainwater and melting snow run downhill, they carry sediment and other materials into our streams, lakes and groundwater. The image below is a watershed illustration.



Watersheds provide water for drinking, irrigation and streams. Many people also enjoy the lakes and streams for their beauty and for boating, fishing, and swimming. Healthy watersheds also provide food and shelter for wildlife.

Working to improve Water Quality

Several water bodies in the Elk River Watershed have been indentified as being impaired! Five stream reaches and seven lakes have been identified as impaired.

A water body is considered impaired if it is not meeting water quality standards for pollutants such as nutrients (phosphorus), bacteria, turbidity or mercury. Once a water is listed as impaired, a Total Maximum Daily Load (TMDL) study is mandatory. Simply put, TMDLs are water management plans that identify impairments to streams and lakes, identify sources of pollutants (what causes impairments), and set limits of thresholds for those pollutants in the stream or lake. Coupled with implementation plans, TMDLs are basically water quality improvement plans. Local water management organizations are drawn to complete these studies on impaired waters because once the TMDL and implementation plan are complete, funding to implement the plan and therefore begin to clean up the water can be sought after.

The ERWSA received adequate funding in 2008 to conduct TMDLs on the following impaired waters: Mayhew Lake, Big Elk Lake (both impaired for Excess Nutrients) and the Elk River from Big Elk Lake to the St. Francis River (impaired for fecal coliform and turbidity). The studies will be completed in three phases over the next three years. Phase I will consist of a review of existing information which will indentify data gaps that will need to be filled in subsequent steps. Phase II will consist of a stepped-up monitoring program identified with work completed in the phase prior. Finally, Phase III will set the TMDL, or threshold, for the pollutants in each of the impaired water bodies in addition to the development of an implementation plan.


Mayhew Lake is impaired for Excess Nutrients: too much phosphorus!

As a stakeholder, you play a critical role in completing the TMDL puzzle. Stakeholder meetings will take place during each phase of the TMDL. The ERWSA will keep you informed of upcoming meetings and opportunities.

This publication was funded through a grant from the Minnesota Pollution Control Agency.

ERWSA has Funded a Variety of Projects over the Years!

Above: A set of test plots during the growing season. Even though the reduction in applied nutrients in the BMP plot changed the timing of corn tasseling, yield was not affected.

Nutrient Management—AgBMP Demonstration Plots

Manure Management test plots are used to evaluate manure management strategies. A small strip of cropland is used to evaluate the University of Minnesota's nutrient recommendations against the producer's normal management strategies. The test plots are customized for each farmer and Best Management Practices for nutrient management are compared to the farmers normal nutrient management strategies. The yields are then checked in the fall to determine if the yields were affected by the U of M's recommendations.

Not only does reduced rates of fertilizer positively affect the wallet of producers, it also reduces the likelihood that excess fertilizer will runoff the land and into nearby surface water during precipitation events.

Results of this practice have indicated that reduced nutrient application has little effect on crop yield and a positive effect on water quality!

Pasture Management

When livestock such as cattle and horses enter waterways their hoof pressure causes bank erosion. Additionally, fecal coliform can enters waterways through livestock urine or defecation. Riparian pasture management practices include fencing, gates, livestock crossings, alternative watering systems and other components that the ERWSA Board had determined are necessary to exclude animals from surface water. Riparian projects located on the Elk River, on lakes directly flowing to the Elk River and flow-through lakes on the Elk River are considered a high priority.

Wetland Restoration/ Enhancement

Healthy wetlands provide habitat for birds and wildlife species as well as play a major role in improving water quality by slowly filtering runoff to provide groundwater recharge. The restorations of wetlands similar to their original conditions then would provide habitat for wildlife, improve or maintain water quality, and improve water flow conditions in the Elk River Watershed. Wetlands are complex systems and planning for their restoration or enhancement takes time. The ERWSA is currently working on wetland restoration projects.

Additional Projects

The projects above have been the focus within the Benton County portion of the watershed due to its high level of agricultural activity. The projects focused on in Sherburne County, which has a higher level of rural and urban areas, have included shoreland buffers, rain gardens, stormwater runoff treatment, and erosion control projects.

Fact: One pound of phosphorus has the potential to create 60 to 100 pounds of algae growth!

Estimates for the watershed indicate that phosphorus has been reduced by 156,000 pounds since 1995 through the installation of management practices like the ones listed here!

Above: Wetland restoration project completed by Brad Houdek in 2007.

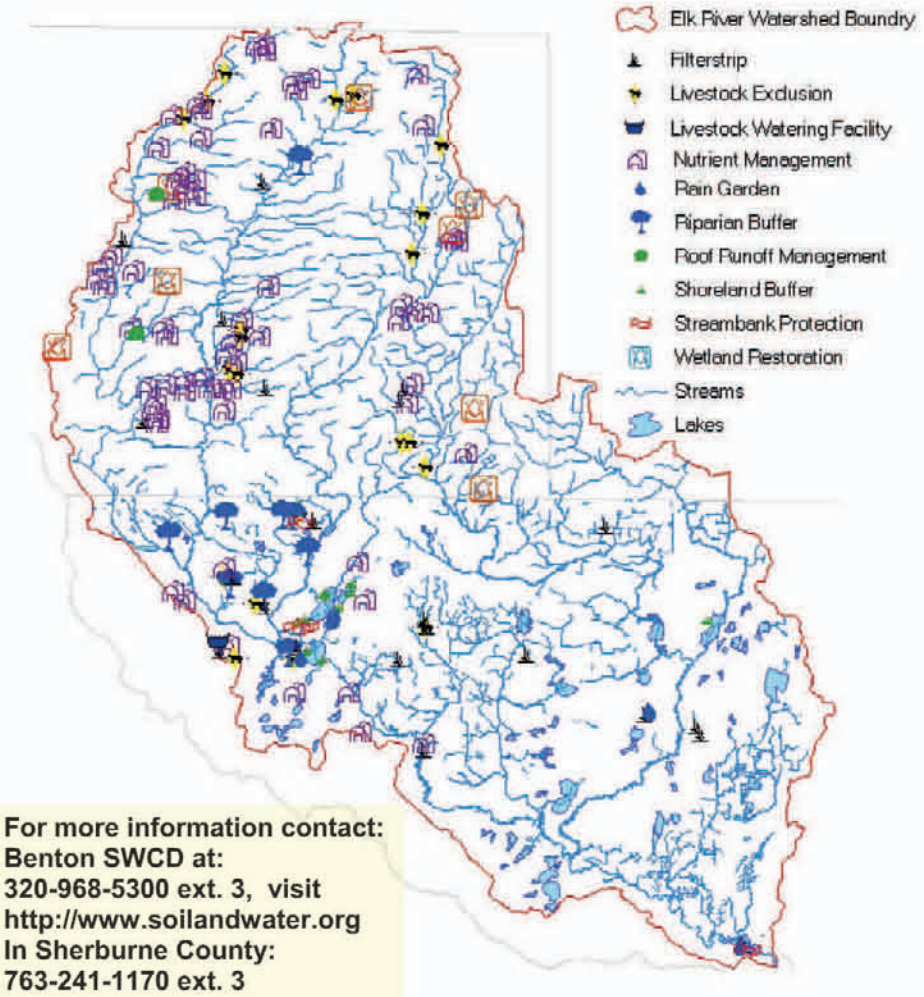
Left: This fence was installed by the Bromenschenkel Brothers in order to prevent livestock from entering a wetland.

Partnership with Landowners Makes the Difference

The Elk River Watershed Association has worked with watershed landowners to put 150 water quality projects on the land. Agricultural projects have included livestock exclusion from waterways, feedlot practices, manure management, wetland restorations, filter strips and riparian buffers. Residential and urban practices include revegetation of lakeshore with buffers of native plant communities and stormwater runoff treatment.

These projects reduce the runoff of pollutants such as phosphorus, nitrogen and sediment to lakes, streams and wetlands.

Elk River Watershed Association Projects 1995-2007

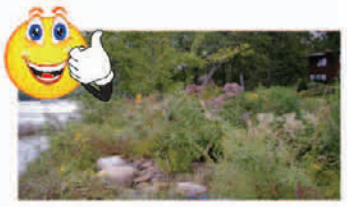


For more information contact:
Benton SWCD at:
320-968-5300 ext. 3, visit
http://www.soilandwater.org
In Sherburne County:
763-241-1170 ext. 3

Watershed Care:
Here are just a few of the things you can do to improve water quality!

Maintain your septic system

- Be sure it is up to code, if not, have it inspected
- Reduce water use
- Use low phosphorus or zero phosphorus soaps and detergents
- Do NOT dispose of medications, paints, or chemicals through your septic system.
- Minimize using harsh cleansers, bleach, detergents, and soaps.
- Do not use a garbage disposal– better options are composting or garbage service.
- Don't use septic tank additives, only pumping totally removes sludge and scum.
- Have your tank pumped every 18 to 36 months. Frequency depends on tank size and use.



Protect your Waterfront:

- Create a buffer of native vegetation on your riparian land (by lakes and streams)

Buffers improve habitat for wildlife and filter pollutants

Manage your Pasture

- Fence livestock out of lakes and streams
- Create a crossing over streams for livestock
- Create an alternative watering system for livestock

Livestock manure, if not managed correctly, contributes to fecal coliform and nutrient levels in waterways.

Use Fertilizer Wisely

On Lawns:

- Use zero phosphorus fertilizer, it's the law!
- Reduce use of fertilizer by leaving grass clippings on the soil, they have nitrogen and phosphorus
- Do not fertilize near the lake or stream

On Crops:

- Follow the University of Minnesota's recommended application rates
- Proper handling, storage and application of fertilizer and manure

Our Conservation Partners

In addition to the projects shown on the watershed map (at left), many other conservation practices are put on the land in the Elk River Watershed through financial and technical assistance from the Soil and Water Conservation Districts and the USDA Natural Resources Conservation Service. Here are a few examples: field windbreaks, riparian buffers, grassed waterways and native prairie planting for wildlife.