

ELK RIVER WATERSHED CURRENTS SPRING 2009

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GREETINGS!

The Elk River Watershed Currents is a watershed wide newsletter developed to provide landowners within the Elk River Watershed current information in regards to ongoing projects lead by the Elk River Watershed Association (ERWSA). The Spring 2009 issue of the Currents was made possible by funding provided by the Upper Mississippi River Source Water Protection Project (UMRSWPP). The UMRSWPP was

formed by the cities of St. Cloud, Minneapolis, and St. Paul, along with local units of government, to partner together for Source Water protection of the Upper Mississippi River. Because the protection of source water must take place at the local level the UMRSWPP is partnering with state and local government units including watershed groups such as the ERWSA in selecting and implementing best management practices

1ST ANNUAL ELK RIVER WATERSHED CLEANUP : A SUCCESS!

The 1st Annual Elk River Watershed Cleanup took place on October 18th, 2008 from 8 am to 12 pm at the Lions Park just north of the City of Big Lake. After munching on a sponsor donated breakfast, 30 volunteers plus six staff team leaders took on the challenge of removing trash and other debris from approximately 3 miles along the Elk River. A wide range of people participated in the event including volunteers from: River City Kids 4-H club, National Honor Society, Big Lake Middle School students, Big Lake Community Lakes Association, Bogart Pederson, Jerry's Auto, SWCD board members and others who said they just wanted to help improve the community.

The volunteers split up into six groups, each with a staff team leader, and went to one of six locations to get busy removing trash. Believe it or not, the groups removed over 300 pounds of trash from the Elk River and surrounding lands! After a morning of hard work, the volunteers met back at Lion's Park to have lunch and talk about their experiences. The participants also received

a reusable grocery bag as part of a "thank you" for their work and enthusiasm.

Trash collected included items such as glass bottles, Styrofoam, aluminum cans, various plastic pieces, cigarette filters, tires, car seats, a metal bed frame, concrete blocks, a stroller, a rug



Volunteers participating at the 1st annual Elk River Watershed Cleanup.



cleaner/vacuum, a broken rake, treated lumber, a metal garbage can, carpet, an advertisement banner, a can of olives, plastic bags, a blood test kit, a hamster cage, golf balls, car mufflers and kids floating devices.

The ERWSA will hold its second annual cleanup on **September 26th, 2009!** If you are interested in learning more about the event contact Tiffany Determan, Watershed Coordinator at: 763-241-1170 ext. 3 or tiffany.determan@mn.nacdn.net



MANY THANKS

To Our 1st Annual Elk River Cleanup sponsors!

Panera Bread, Waste Management, Wapiti Park, Steinbrecher Companies Inc., Town of Big Lake, Jimmy John's, MN DNR Adopt-a-River, Diamond city Bread, Jerry's Auto Park and Salvage, Central Appliance Recyclers, Allied Waste Services, Coborn's, Sherburne County Planning and Zoning, NRCS, City of Elk River, and Sherburne SWCD.

INCREASING INTEREST IN NATURAL LANDSCAPING



In a broad sense, natural or alternative landscaping emphasizes the use of native plants and natural materials over conventional turf grass lawns and non-native plants. Natural landscaping usually results in less maintenance costs, less or no need of lawn chemicals such as fertilizer and herbicides, less or no irrigation costs, more habitat

and bio-diversity, and improved soil and water quality.

Natural landscaping can be aesthetically pleasing and functional. It can also be easy. Simply choosing to plant an Eastern White Pine (native) in place of a Swiss Stone Pine (non-native) would be an example of natural landscaping. Although, to reap the full benefits of natural landscaping it requires a little more effort than this!

Good sources for technical assistance and for information on natural landscaping can be found at the Benton and Sherburne Soil and Water Conservation District offices or on the internet by searching "natural landscaping."

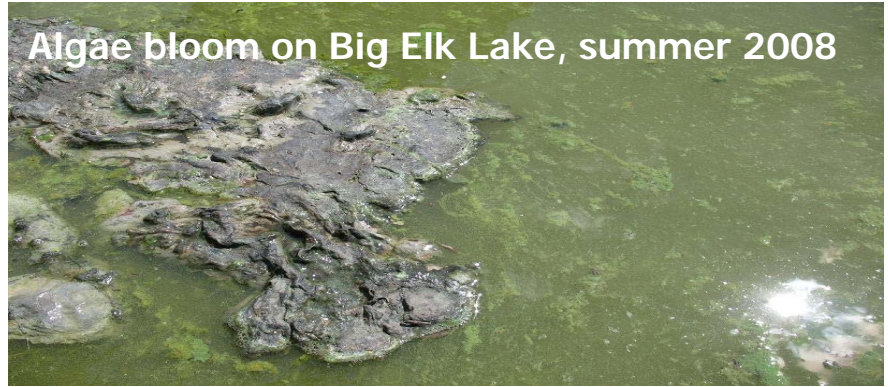
Pictured: local examples of natural landscaping.



ELK RIVER WATERSHED WATER QUALITY STUDIES BEGIN!

TOTAL MAXIMUM DAILY LOADS?

Under the federal Clean Water Act, states must conduct a Total Maximum Daily Load (TMDL) study for each pollutant affecting an impaired water. The study identifies all pollutant sources and determines the amount of reduction needed by each source to effectively restore water quality. State agencies, local groups and other stakeholders work together, using water sampling data, computer modeling and public input to develop TMDLs.



Algae bloom on Big Elk Lake, summer 2008

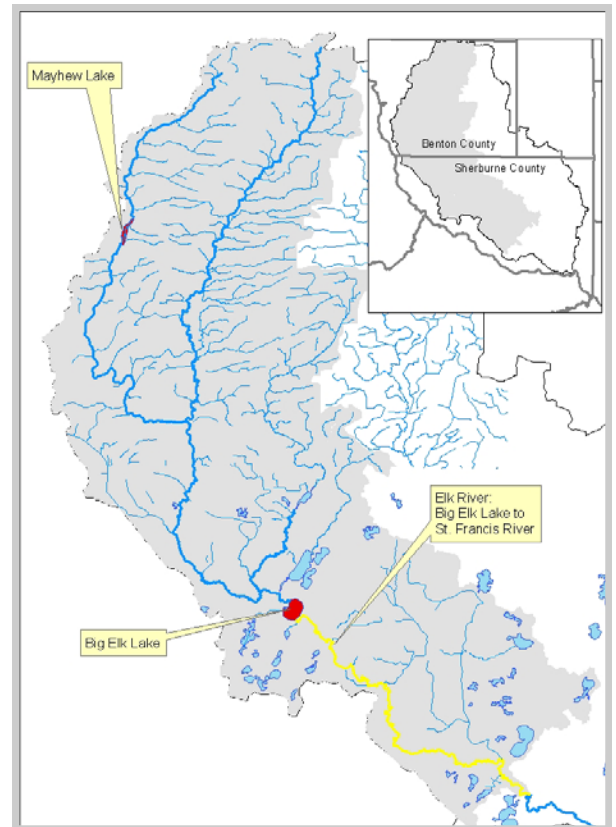
WATERSHED TMDLS MOVING RIGHT ALONG!

In August of 2008 the ERWSA along with their project partners, the Minnesota Pollution Control Agency (MPCA) and Wenck Inc. began work on four TMDLs within the Elk River Watershed. TMDLs are scheduled to be completed for Big Elk Lake, Mayhew Lake and Elk River (from Big Elk Lake to the St. Francis River) and will be completed over three phases.

The first phase, now complete, consisted of the collection and review of all existing information pertaining to the impaired waters. Additionally, Phase I consisted of the completion of a visual survey of the Elk River and its' tributaries. This survey, completed in September 2008, was done to field-verify the possible causes of pollutants along the Elk River and its' tributaries. The results of the field survey, along with a summary of all data collected in Phase I were incorporated into a Phase I TMDL report which lays out

the lake and stream sampling that will be carried out over the summer of 2009. The sampling plan outlined in the report will allow professionals to determine where pollution such as E. coli, turbidity and nutrients are originating. The first Phase was officially complete after a stakeholder meeting was held in March of 2009. See the article "What You Missed, the stakeholder meeting" to learn what you may have missed if you could not attend the meeting.

The next phase (Phase II) in the TMDL project will consist of detailed water quality monitoring followed by the completion of a detailed computer analysis of the watershed. Phase II will also be completed with a stakeholder meeting.



WHAT YOU MISSED; STAKEHOLDER MEETING



The first Elk River Watershed TMDL Public Meeting was held on March 19th, 2009 from 6 pm to 8 pm at the Palmer Town Hall in Clear Lake, MN. The meeting was held in an open house format with two short presentations beginning at 6:30 pm. The open house format allowed stakeholders to spend as much or as little time learning about the TMDL process as they wanted. Prior to the presentations, participants were encouraged to walk around the room to view poster boards that described the TMDL process, explained why the water bodies are considered impaired, and described what some of the pollution sources could be. Presentations were given by the Minnesota Pollution Control Agency (MPCA) and Sherburne SWCD (representing the ERWSA).

Staff explained that stakeholders may want to become involved with the

TMDL process for several reasons including:

- locals have local information
- the project team wants to hear what stakeholders have to say
- it is a chance to be proactive (go ahead, install a Best Management Practice!)
- it is an opportunity to learn about programs that may be available
- last but not least upon completion of the Implementation Plan there may be money available to provide cost share and/or incentives to install BMPs. Staying involved and active could give you the information you need to apply for the funds.

There will be additional stakeholder meetings and opportunities to become involved with the Elk River Watershed TMDLs. If you would like more information on the Elk River Watershed TMDLs or would like to find out how you can become involved visit the Benton or Sherburne SWCD websites at www.soilandwater.org or www.sherburneswcd.org respectively.





WHAT YOU CAN DO

- **Use zero phosphorus fertilizer**– it's the law!
- **Don't sweep or blow leaves into the street**– they will end up in the storm sewer and then the lake.
- **Install a Rain Garden**– they catch runoff from your yard and filter it.
- **Use a Rain Barrel**– they catch runoff from your roof and you can use it to water your garden.
- **Install farm buffers**– they reduce runoff and prevent sediment, nutrients and/or bacteria from entering the water.
- **Upgrade failing or direct discharge septic systems**– needs no further explanation!
- **Educate you neighbors!**
- **Restore your shoreline**– plant a native vegetation buffer.

ERWSA TMDLS AT A GLANCE

Impaired Waters and Pollutant:

Elk River (Big Elk Lake to St. Francis River): turbidity & fecal coliform

Big Elk Lake: Excess nutrients

Mayhew Lake: Excess nutrients

Three Phases:

Phase I: Data gathering, preliminary source assessment, monitoring plant development, report, public meeting (August 2008– March 2009)

Phase II: Detailed surface water monitoring, data analysis, public meeting (April 2009– February 2010)

Phase III: Complete TMDL report and Implementation Plan, public meeting (March 2010– March 2011)

ERWSA FEATURED CONSERVATION PARTNERS

Since the onset of the ERWSA, the group has sought funds to provide incentives and cost share to landowners willing to install Best Management Practices including: Nutrient management test plots, wetland restoration/enhancements, buffer strips along pastured ditches and steams, and filter strips, rain gardens and infiltration ponds.

Sherburne County: Carol and Mark Nierman Eagle Lake, Big Lake Township

Rain garden: a shallow depression constructed to store and infiltrate stormwater runoff from impervious surfaces such as roads, houses, and parking lots. They are typically planted with native wildflowers, grasses, and shrubs.

Carol and Mark Nierman installed a rain garden during August 2008.

Sherburne SWCD: Can you explain why you wanted to install a rain garden?

Carol and Mark: Our street doesn't have any curbs or storm sewer to control the water flow when it rains. With our lot sitting at the lower point of the street, we get most of the runoff. The rain garden seemed to be the way we could better control the flow of the water as well as add some interest to the landscape.

Q: How did you find out about rain gardens as an option?

A: When we first planned our landscape, the Sherburne County Planning and Zoning department mentioned the possibility of a rain garden. We did some searching on the internet to get some more information on the gardens.

Q: How did you go about finding the technical assistance to design the garden?

A: We did find a website, <http://dnr.wi.gov/runoff/rg> that gave details of how to create a rain garden. But it looked like we could probably benefit from getting our landscaper, Tony

Zimmerman from A to Z Services involved. We also had come across an article in the Star Tribune that discussed the benefits of rain gardens and that some communities were providing assistance to home owners with design and cost. We were directed to the local SWCD, whose staff helped with the design and provided cost sharing.

Q: Were there difficulties or surprises along the way?

A: We were surprised at how large (due to the larger than normal drainage area) the garden needed to be. At first it felt like we were replacing most of the yard. We talked it through and figured out that part of the garden could be sod. That allowed us the look we wanted along with the functionality of the garden. Then, the night after we finished constructing the garden and installing the wood chips, we had a heavy rainfall that washed out the overflow berm and chips. So, instead of planting the next day, we ended up re-constructing the garden!

Q: How do you feel about the finished product and its performance?

A: We installed the garden in August, so we haven't had a chance to see all the native plants bloom yet. But even without the blooms, the area is much more attractive than what we had before. We haven't had any major storms after building the garden last fall, but we did notice that the water was staying in the garden and soaking into the ground after the few smaller storms we did have.

Q: Would you endorse rain gardens as a good option for residential lake residents?

A: We would definitely recommend rain gardens. If designed correctly, they will reduce the amount of runoff and erosion; getting water to soak into the ground instead of running to the lowest part of the property. And the plants will not only add to the appearance of the yard, but will also attract butterflies and other beneficial species.



Nierman rain garden, completed in 2008.

Benton County: Roy Schneider 300 acres of Corn/soybeans Glendorado Township



Roy Schneider completed test plots with his strip tillage cart in 2006 and 2007

Nutrient Management (AgBMP) Demonstration Plots are used to evaluate 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 compared Best Management Practices (BMPs) for nutrient management to the farmer's normal nutrient management strategies.

Benton SWCD staff interviewed Roy to see what he thought of the nutrient management test plot program employed by the ERWSA. Roy

Schneider farms approximately 300 acres in St. George Township. Roy's crops consist of a corn-soybean rotation and he also has beef cows.

Benton SWCD: What year did you do the test plot?

Roy: We did test plots in both 2006 and 2007

Q: What nutrient management strategies did you compare?

A: In 2006 compared manure vs. no manure and urea vs. no urea. In 2007 fall applied manure vs. spring applied manure.

Q: What were the results?

A: The yields were less than half of the yield goals; but only because both years were hit hard by drought.

Q: Do you plan to use the rates that were recommended for the test plot?

A: In the future I do plan to use the test plot application rates.

Q: What are your feelings about the test plot program?

A: The program has allowed me to be able to learn the value of the manure and adjust commercial fertilizer accordingly.

Q: Was it easy to get enrolled?

A: Enrollment was easy; although it was difficult to learn what programs were available in the first place.

Q: Will you try something like this again?

A: Yes, I am always looking for methods to aid in better manure utilization.

Q: In the future, would you like to implement any additional BMPs?

A: Yes, I would like to add a composting facility for manure which would not only make it easier to handle I would not have to apply during the winter. My goal is to take care of any potential problems before anybody tells me I have to.

Q: Anything else they want to add?

A: Overall I have been happy with the programs made available through the ERWSA. My advice to someone who is looking to make a change on the farm is to take the time to look at the programs out there and find a program that fits what you want to do. There are many programs that provide some cost-share to help make those changes.



PROTECTING DRINKING WATER

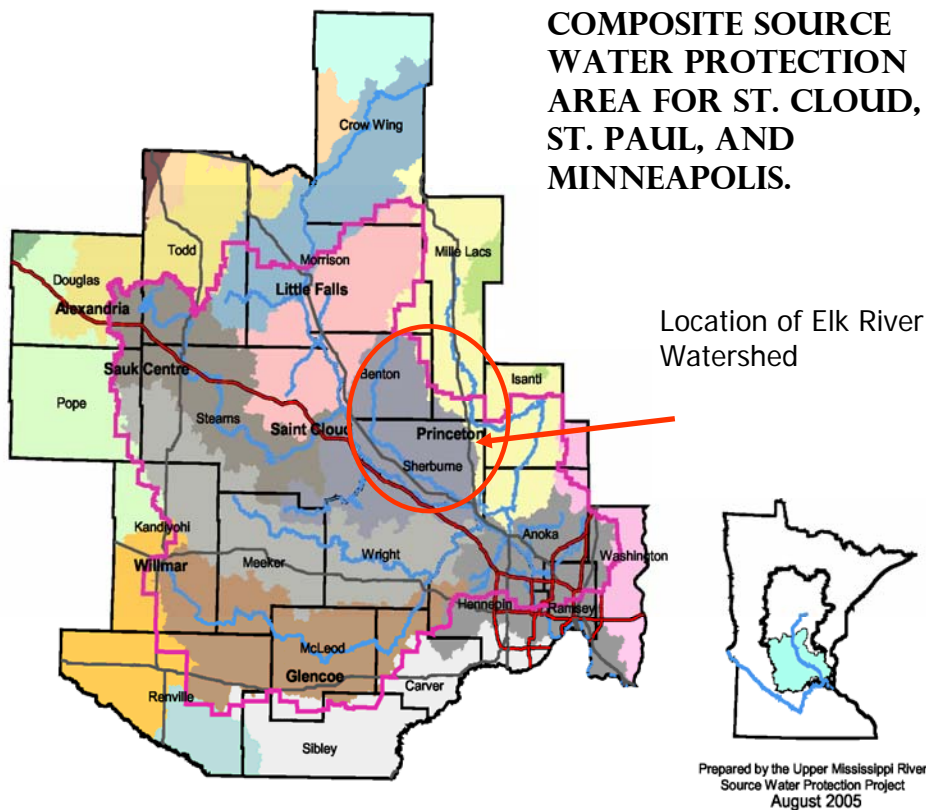
The Mississippi River and its tributaries serve as the public water supply for the cities of St. Cloud, St. Paul, and Minneapolis and several nearby communities. Collectively, these water systems serve more than 900,000 citizens, approximately 20% of Minnesota's population. The Mississippi River is the exclusive source of drinking water for St. Cloud and Minneapolis and the primary source for St. Paul. Through the Upper Mississippi River Source Water Protection Project (UMRSWPP), these three cities are working to protect the source of their drinking water. To accomplish this, the UMRSWPP will be working in cooperation with watershed groups and other local units of government to protect and improve the Mississippi River and its tributaries through watershed management. In addition to the three water suppliers, other participants in the UMRSWPP are the MN Department of Health, the Minnesota Pollution Control Agency (which has provided major project funding), the MN Rural Water Association, and the Metropolitan Council.

Recently, the three cities completed their Source Water Protection Plans, and the State of Minnesota, through the MN Department of Health, has endorsed each of the plans. These plans include 1) a delineated "Source Water Protection Area," that is, the geographic area of concern that drains to the respective intakes of St. Cloud, St. Paul, and Minneapolis, 2) an inventory of the potential sources of contaminants within these Source Water Protection Areas, and 3) a description of strategies and objectives designed to respond to these contami-

nant threats and protect the source water of the three cities. Implementation of the three source water protection plans will emphasize collaboration with local units of government, especially watershed groups, within each of the source water protection areas. The three source water protection areas were delineated such that combining the three areas results in a single "composite" source water protection area that covers approximately 7,700 square miles of watersheds that drain to the Mississippi River (see accompanying map).

The Elk River Watershed is located within the Source Water Protection Area for St. Paul and Minneapolis. The Elk flows into the Mississippi

approximately 25 miles upstream of the St. Paul and Minneapolis Mississippi River intakes. Therefore, land use activities and decisions within the Elk River Watershed directly influence the quality of the source water arriving at the water intakes of the two cities. Source water protection for St. Cloud, St. Paul, and Minneapolis can only be accomplished at the watershed level through the good work of organizations like the Elk River Watershed Association. Therefore, support of and cooperation with these organizations is an important element of the UMRSWPP's work plan, and a central component of future source protection initiatives on the Mississippi River.



WE NEED YOUR HELP TO MONITOR THE LAKES AND RIVERS IN YOUR AREA

Did you know that there are 92,000 miles of streams and rivers and more than 105,000 lakes in Minnesota? Did you know that the Minnesota Pollution Control Agency (MPCA) has citizen volunteer programs to help monitor those lakes and rivers? The Citizen Lake Monitoring Program and the Citizen Stream Monitoring Program are a great way for residents to get involved with their nearby lakes and rivers. The MPCA is looking for more volunteers in the Mississippi River Watershed, near St. Cloud. Please consider getting involved. Monitoring is easy and fun and the MPCA provides you with the equipment and training. Check out the MPCA Web site for more information at: www.pca.state.mn.us/cmp or call 1-800-657-3864 (toll free).

YES!

I want to help protect The Elk River Watershed's water quality and our quality of life!

___\$35. ___\$50 ___\$100 ___\$250 ___\$500 ___\$1000
 ___other ___amount

Please enclose a check payable to Sherburne SWCD

Name _____

City _____ State _____ Zip _____ Phone _____

Send this form with your check to: Sherburne SWCD • 14855 HWY 10 • Elk River, MN 55330
 Phone 763-241-1170 ext. 3 • Fax 763-241-1161 • www.sherburneswcd.org

NUTRIENT MANAGEMENT TEST PLOTS: WHAT'S THE VERDICT?

Once again, in 2008 the Benton SWCD completed nutrient management test plots in the Elk River Watershed. Like years past, manure and fertilizer application rates were compared to the University of Minnesota's recommendations. The big change this year was that more farmers compared under application rates versus the U of M recommendations instead of over application rates like years past.

In 2008, 14 test plots were completed with eight different farmers in the ERWS. Test plots were completed on a variety of crops including: sweet corn, soybeans, oats and hay. Our calculations indicate that nitrogen (N) rates were reduced by 30 pounds per acre, phosphorus (P) by 19 pounds per acre, and potash (K) rates were reduced by 49 pounds per acre.

The 2008 test plots were analyzed to determine how successful the test plots were. Overall, the analysis results for 2008 indicated that there was little to no difference in yield production when following U of M recommended fertilizer application rates versus the over or under-application rates.

Due to variability in soil types from field to field and even from field to field within the same farm., it is difficult to recommend a fertilizer application strategy based on the results. If you are interested in changing nutrient application levels it is recommended that individuals try their own test plots. If the changes work out for the better, then you can start to think about making changes on a larger scale.

