

# RIVER TALK

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## THE MINNESOTA RIVER CURRENT

### RIVER RENDEZVOUS

By Mark Fischenich, Mankato Free Press

There's a resource stretching across southwestern and south-central Minnesota that's fascinating and little known by most residents of the state, even the ones who live in the Minnesota River Valley.

The Water Resources Center wants to change that. So they brought a proposal to the group that divvies up the state lottery proceeds, asking for \$125,000 to create "Minnesota River Experts: An educational field trip online."

"And 95 percent of the public will never meet them," Kudelka said. In this case, people at the Minnesota State University Water Resources aren't talking about the river. They're talking about the experts who study it.

Biologists, geologists, naturalists, historians ... They've got intriguing stories to tell the knowledge to share, said Scott Kudelka, communications coordinator at the Water Resources Center.

The Legislative-Citizen Commission on Minnesota Resources liked the idea, recommending approval for that and 47 other proposals out of 240 requests. The result, by 2011, will be a "virtual field trip" that Minnesotans - and anyone else around the world who cares to - can join via a new Web site.

Specifically, the site will answer questions about the Minnesota River, the creatures that live there, the way it came into existence, how people have changed it and much more. And it will answer lots of questions.

The plan is to talk to about 25 experts and have them tackle 15 or 20 questions each. Users will be able to click on the questions that interest them and get the answer through video responses.

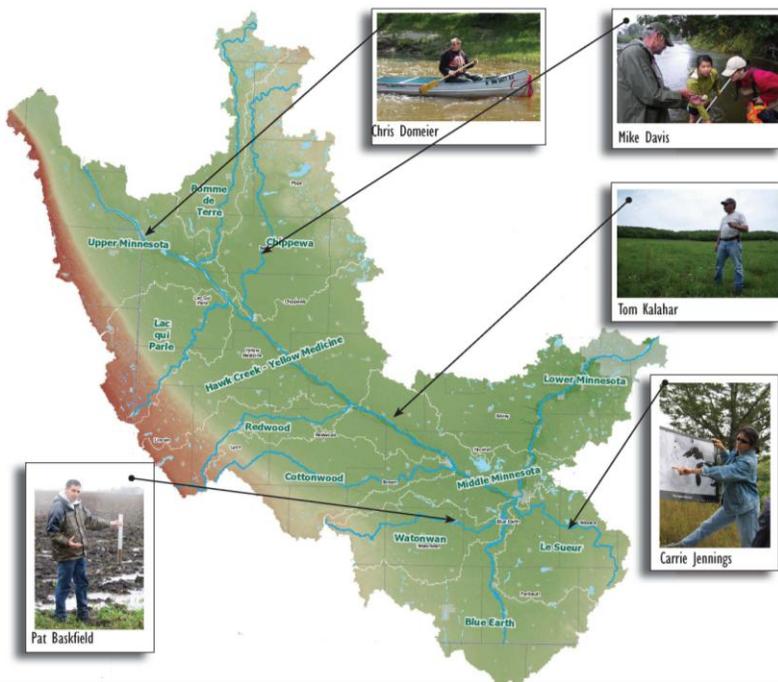
The 500 or so questions will come from citizens, the Water Resource Center's board of directors and students at three schools that are participating in the effort - the Minnesota New Country School near Henderson, the public school in Gaylord and the Dawson-Boyd schools.

The experts will be filmed in their element, not sitting behind a desk. "That way you show off the resource," Kudelka said. "I think that's what gets people excited."

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### Minnesota River Experts: An educational field trip online

LCCMR ID: 194-F  
Kimberly Musser, Minnesota State University, Mankato Water Resources Center



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**DID YOU KNOW?**

**Minnesotans and Their Water Survey**

From the water we drink and use to grow our food, to the lakes and rivers that provide recreation for us and habitat for wildlife, Minnesota's water supply is vital, precious and worth protecting.

The Minnesota State Legislature has charged the Water Resources Center at the University of Minnesota with designing a framework on how and when to make investments that will ensure the purity and abundance of Minnesota's water for generations to come.

And because the state's water resources belong to the people of Minnesota, the framework team has created a Citizen/Stakeholder Advisory Group tasked with gathering public opinion via surveys and listening sessions on a range of water issues - from boating to agricultural practices.

Here's your chance to be heard on issues of water quality, water usage and priorities- -please share your opinions by answering the following questions at <http://wrc.umn.edu/watersustainabilityframework/MinnesotansandTheirWater/index.htm>

Survey responses will be tallied and used to guide the framework's final set of recommendations. The final report is to be prepared by the Fall/Winter of 2010-2011 and reviewed before being presented to the Minnesota State Legislature on January 15, 2011. If you have additional comments or questions about the project, please email [water@umn.edu](mailto:water@umn.edu).

Learn more about the Minnesota Water Sustainability Framework by going to <http://wrc.umn.edu/watersustainabilityframework/index.htm>

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**Watershed Alliance Coordinating Team:**

- Jesse Anderson, Lower Sioux Indian Community
  - [oeairq@redred.com](mailto:oeairq@redred.com)  
507-644-8353
- Susie Carlin, Minnesota River Board
  - [susan.carlin@mnsu.edu](mailto:susan.carlin@mnsu.edu)  
507-389-6279
- Brad Cobb, Green Corridor Project
  - [1231tlc@charter.net](mailto:1231tlc@charter.net)  
320-493-4695
- Dee Czech, MN Earth Sabbath Team
  - [dczech@frontiernet.net](mailto:dczech@frontiernet.net)  
507-964-5171
- James Fett, Maple River CWP Technician
  - [james\\_the\\_walleye@hotmail.com](mailto:james_the_walleye@hotmail.com)  
507-521-3388
- Chantill Kahler-Royer, Bolton & Menk
  - [chantillka@bolton-menk.com](mailto:chantillka@bolton-menk.com)  
507-625-4171
- Tim Lies, Friends of the Minnesota Valley
  - [timlies@hotmail.com](mailto:timlies@hotmail.com)  
612-749-3958
- Patrick Moore, Clean Up the River Environment
  - [patrick@cureriver.org](mailto:patrick@cureriver.org)  
320-269-2984
- Lori Nelson, Friends of the Minnesota Valley
  - [lnelson@friendsofmnvalley.org](mailto:lnelson@friendsofmnvalley.org)  
612-370-9123
- Brooke Patterson, Brown County Water Planner
  - [brookepatterson@co.brown.mn.us](mailto:brookepatterson@co.brown.mn.us)  
320-233-6640
- Forrest Peterson, MPCA
  - [forrest.peterson@state.mn.us](mailto:forrest.peterson@state.mn.us)  
320-441-6972
- Lee Sundmark, MN DNR
  - [lee.sundmark@dnr.state.mn.us](mailto:lee.sundmark@dnr.state.mn.us)  
320-234-2550
- Joel Wurscher, High Island Creek & Rush River
  - [joelw@co.sibley.mn.us](mailto:joelw@co.sibley.mn.us)  
507-237-4050

Scott Kudelka, Editor (507-389-2304)

Check out the Watershed Alliance's web site:  
<http://watershedalliance.blogspot.com>





On November 2, 2009 the remaining partners of the Big Stone II Project announced the planned 500-to-600 megawatt coal-fired plant would no longer be built. The four utility companies – Central Minnesota Municipal Power Agency, Heartland Consumers Power District, Missouri River Energy Services and Montana-Dakota Utilities Company – weren't able to find additional partners to fund the \$1.6 billion project.

Initially, seven utilities were involved when construction of the plant was announced in 2004 on the same site as the first Big Stone Coal Plant. Both coal plants would be located on the South Dakota side of Big Stone Lake across from Ortonville, Minnesota. In September of this year, Otter Tail Power Company backed out of the project because of the lower demand for electricity due to the ongoing economic recession along with the potential cost for carbon dioxide emissions and regulations to combat climate change.

When the utility companies announced the proposed construction of this coal-fired plant it raised questions about the level of mercury that would be emitted and the amount of water removed from the Minnesota River for cooling needs. Local non-profit organizations like Clean Up the River Environment (CURE) out of Montevideo and national groups including American Rivers got involved because of the concern for both environmental and human health issues. In 2008, American Rivers listed the Minnesota River as the 5<sup>th</sup> most endangered river in the nation.

The utility companies had secured permits from the State of South Dakota to pump up to 3.2 billion gallons of water out of the Minnesota River without any direct input from the state of Minnesota and another 3.2 billion gallons of water from the Lake

Veblen Aquifer in northeastern South Dakota. Drawing down this amount of water could have the potential to cause harm to aquatic organisms including increased fish kills and higher levels of nutrients, especially during drought conditions.

The other major concern dealt with the admission of mercury, a potent neurotoxin that can cause permanent brain damage. Currently the Minnesota River is on the Impaired Waters list for mercury in fish. According to American Rivers, coal-fired plants are the largest emitters of mercury in the United States and Big Stone II could have released as much as 4,000 pounds of mercury over 50 years of operation on top of what is already being emitted by the original Big Stone coal plant.

With the coal-fired plant project officially dead in its tracks, CURE and other organizations are looking to the future by collaborating with rural electric co-ops and municipalities to utilize alternative power sources like wind to supply the



energy needs that would have been met by the Big Stone II plant. "We have said for the past 4 years that the cheapest new form of reliable electricity generation is wind backed by natural gas," related Duane Ninneman, CURE Renewable Energy Consultant. "Now it looks as if several of the former Big Stone II partners will be going in that direction."

CURE is hoping to develop an engaging conversation and partnership with regional rural electric cooperatives and municipal power companies by advocating for the use of solar and wind technology along with promoting energy efficiency and conservation. "We will soon view our shift to smart-clean energy in the same way we have come to embrace and expect internet and cell service," Ninneman offered. "At the foundation of this system is energy efficiency and conservation delivered in a partnership between electric utilities and their customers."

To move this new initiative forward, CURE is working with a number of businesses and government entities to build an energy efficient home in Montevideo as part of Habitat for Humanity. "There is a tremendous opportunity to create sustainable jobs, said Patrick Moore, CURE's Executive Director, "that will help our region emerge as leader in the clean energy economy."

## COMMUNITY CLEAN-UPS CUT WATER POLLUTION

By Fritz Busch, *New Ulm Journal*

A Community Cleanup project featuring local residents and leaders from Twins Cities environmental organizations is being made into a DVD to encourage other Minnesota communities to create water conservation projects.

On November 14<sup>th</sup> members of the Friends of the Minnesota Valley, Coalition for a Clean Minnesota River (CCMR) and the Freshwater Society raked leaves from street gutters along South Garden Street, packed them into plastic bags and hauled them to a city compost site east of the North Broadway extension.

Earlier this fall, the Minnesota Pollution Control Agency (MPCA) approved \$6 million for water quality projects across the state.

The grant list included \$110,000 to the Friends of the Minnesota Valley for Minnesota River Community Clean-ups for water quality improvement by reducing water pollution.

Joan Nephew of the Freshwater Society said a pound of phosphorus produces about 1,000 pounds of algae.

"We're trying to make a cultural shift in the way people do things like disposing of leaves by making an instructional film and DVD," Nephew said.

"Instead of trying to make your lawn look immaculate, we want people to look at what's best for the environment. If you rake leaves, take them to a compost site. Better yet, mulch them. Every street is a tributary to the river."

She urged residents to pick up leaves and pet excrement from yards before spring rains and use phosphorus-free fertilizer sparingly.

Don Borstad of New Ulm said residents couldn't be too careful about what they do with fallen leaves.

"Raking or blowing them into the street only causes more pollution," Borstad said. "I lived in Germany for 25 years. They're more concerned about pollution there. It's against the law to mow lawns on Sunday there."

### Controlled Drainage Structures

Water quality advocates said they are also promoting water level control structures that allow producers to seasonally adjust field water levels.

Solar-powered water control structures made by Iowa-based Agri Drain Corp., allows water to be retained through the winter, or fallow months, preserving nitrogen.

Water levels are lowered just before spring field work; raised to preserve moisture for dry summer months and lowered to easier fall field work.

Some field trails including those at the University of Minnesota Southwest Research and Outreach Center have shown up to 40-bushel yield increases, 91 percent nitrate load reduction and 75 percent phosphorus load reduction who controlled drainage.

The Agriculture Drainage Management Coalition said controlled drainage structures could create 300-bushel corn yields.

Once more trial data is in, proponents say controlled drainage equipment will become hot sellers.

Other MPCA-funded projects approved this fall include \$340,000 for the Rush River TMDL Implementation Project for Fecal Coliform, \$205,186 for Lower Minnesota River Dissolved Oxygen Elevation Project, and \$175,575 to the Redwood-Cottonwood Rivers Control Area Watershed Non-point Pollution Reduction Project.

### Community Clean-ups for Water Quality

Community Clean-Ups for Water Quality are local projects that can significantly reduce the phosphorus flowing into lakes and rivers by removing leaves and yard debris from city streets. A community group such as a scout group, a school class, a church committee, a service organization or a group of neighbors can participate. Volunteers rake, sweep and bag leaves, dirt and debris blocking storm drain grates on city streets. The organic material can then be composted.

Community Clean-Ups for Water Quality have been sponsored for years by Friends of the Minnesota Valley. The Freshwater Society is helping to take the volunteer effort to organizations across the state as part of 2010 - The Year of Water, a statewide initiative to raise awareness and promote action to protect, conserve and restore Minnesota's waters. For more information call 952-471-9773, 888-471-9773 or send an email to [freshwater@freshwater.org](mailto:freshwater@freshwater.org)





The Chippewa River continues to carry sediment to the Minnesota River by the dump truck load.

Last year it averaged about 88 tons a day, and in previous years it has been as high as an average of 186 tons, or nine dump truck loads a day, according to data collected by Paul Wymar, scientist with the Chippewa River Watershed Project.

Now comes the real heavy lifting: Finding ways to significantly reduce that load and meet federal clean water standards for the river.

The Chippewa River Watershed Project intends to have its plan in place on how to do that next summer, Director Kylene Olson told attendees at a meeting on December 1<sup>st</sup> in Benson.

The plan will use a “carrot” approach to encourage improvements, but some attendees said regulatory pressures may be coming as well. The state and federal government are seeking ways to reduce the Minnesota river’s sediment load, possibly by as much as 50 percent in the next 20 years.

“The bull’s eye is the Minnesota River,” said Patrick Moore, director of Clean Up our River Environment (CURE), a citizen’s group based in Montevideo. “People need to understand that.”

The meeting launched what Olson hopes will develop into a “stakeholders” group of landowners and other watershed residents who will work to find ways to address the Chippewa River’s problems with sediment. Most of the reaches in the river have been listed as impaired due to the high levels of turbidity.

The Minnesota Pollution Control Agency will establish what are known as total daily maximum loads. In effect, it will set limits on how much sediment the Chippewa River can continue to dump into the Minnesota River.

Years of collecting data in the Chippewa River’s sprawling, 1.3 million-acre watershed have provided a good picture of where the sediment is coming from, according to Joe Bischoff of Wench Associates in Maple Plain.

It’s a complicated picture, and influenced greatly by the changing flow levels in the river, he told attendees. Erosion from farm fields and stream banks during moderate- and high-flow levels are major sources of the sediment that cloud the river’s waters.

There are plenty of other sources too. There are a few carp-infested and algae-rich lakes – Shakopee Lake being among the worst – that contribute to turbidity even when water flows in the river are low.

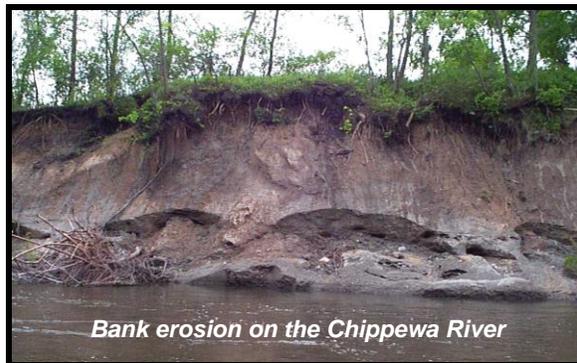
The challenge for the watershed is that most of the sediment comes from non-point, and consequently unregulated, sources.

Olson indicated that the watershed will continue to promote incentives that help landowners adopt best management practices to reduce erosion. She said that “economic viability” will be considered in developing the implementation plan.

The director also acknowledged the difficulties of promoting voluntary improvements when they come with costs or interfere with profitable farm practices. There are some sub-basins, she told the attendees, “where we can’t get any changes to happen.”

Richard Heimkes, a property owner on

Gilchrist Lake, said he has seen all the wrong kinds of changes since he began monitoring water quality as a volunteer nearly 19 years ago. Heimkes said we may have abused Mother Nature too far.



He expressed frustration about an approach to cleaning up the waterway that has regulated point sources of pollution, but not non-point sources. Property owners along the lake are required to invest \$6,000 to \$12,000 in septic systems to meet the law. Yet upstream of the lake, 50 head of cattle have been allowed to wade and stand in water for years without any regulatory action, he said.

Property owners along Lake Pepin and legislators along the lower reaches of the Minnesota River are frustrated too, and demanding action, according to Moore. The Minnesota River delivers 80 percent of the sediments that are rapidly filling the lake.

He said there are growing calls for the enforcement of laws already on the books.

## NEW FARMING PRACTICES IN MIDDLE OF GLOBAL WARMING DEBATE

By Mark Steil, Minnesota Public Radio

America's vast stretches of farmland are a big resource in the fight against global warming because their soil traps carbon. But not all farmers believe changing their ways to help in that fight would be profitable.

The global warming bill the House passed last summer gives farmers incentives to manage their soil to trap carbon, one of the main factors in global warming.

Carmen Fernholz, an organic farmer in western Minnesota, does things a little differently from most other farmers. For instance, he plants radishes in the late summer after his main crop harvest, but the radishes will never be harvested for food. Instead, he leaves them in the ground all winter long.



"In the spring as the temperatures warm up [the radishes] start decaying and disappearing," Fernholz said. "And in this decay process it's slowly releasing the nutrients that it scavenged the previous fall."

Those nutrients will help fertilize next year's crop. But the radishes also help global warming. Through photosynthesis, the radishes convert carbon dioxide, a greenhouse gas, into organic plant matter.

When the radish dies and decomposes, the carbon in the plant also remains stored in the soil. Fernholz said the nutrient benefits are his main objective in planting the radishes, but he also likes knowing they help reduce greenhouse gasses.

"The less we can have a carbon footprint, I think the better we are," said Fernholz. "So yes, there's no question that's where I'm looking at, in those directions.

If the U.S. House has its way, there could be a lot more farms like Fernholz's in the future. The House passed a bill last summer aimed at reducing global warming, and the Senate will take up the legislation too.

The House bill would pay farmers to manage their land to store carbon - - the carbon is "sequestered," in agricultural parlance. Fernholz said the legislation signals a change in the world of farming.

"I think the fact that it did pass is definitely a positive," said Fernholz.

Some farmers worry the bill will raise the cost of agriculture and possibly put them out of business. Others, like James Dontje, say the House bill doesn't go far enough

"It was really an attempt to limit how much agriculture had to change," Dontje said. "It conveys the message of, 'Leave me alone, we don't want to change.

Dontje manages the Johnson Center for Environmental Innovation at Gustavus Adolphus College in St. Peter and is part owner of a farm just across the Minnesota border in northern Iowa. Dontje said a big part of the "leave us alone" message in the legislation concerned protective measures for ethanol made from corn.

"Outside of farm country, the ethanol industry is seen as a political pork barrel project," Dontje said.

But for many farm-state House members, including their leader, U.S. Rep. Collin Peterson,

D-Minn., is a success story. Although supporters say that ethanol helps reduce greenhouse gases, Dontje said it may actually contribute to global warming.

He said that's because the fuel helped boost corn practices, causing farmers in other parts of the world to plow up virgin land to grow the suddenly very profitable grain. That land breaking releases significant amounts of greenhouse gases.

The House bill prohibits using the land issue in calculating ethanol's carbon footprint. Dontje said those sorts of protective measure are the wrong position for farmers to take.

"Carbon sequestration will have some value and that becomes an income stream," said Dontje. "By adopting an oppositional, 'keep your hands off approach,' agriculture might miss some of the opportunities."

He said those opportunities include expanding production of farm-based energy, ones that are more efficient than corn ethanol. He said that includes biofuels made from grasses and other farm produce. The grasses store carbon in the soil, and the fuel would help reduce gasoline use, a major source of greenhouse emissions.

Dontje said another opportunity is to use gas collectors which capture livestock methane emissions, a contributor to global warming. Dontje also said more wind energy production should be built, reducing the nation's reliance on coal-based electricity.





By Troy Krause, Redwood Falls Gazette

This past summer a bus tour was conducted which brought a variety of stakeholders into the fold of what is known as the Green Corridor Project.

The project, which got its start as an offshoot of the Tatanka Bluffs concept, has been working to find ways to enhance recreational opportunities in the Minnesota River Watershed.

One of those recreational areas is the use of the river itself, and the group recently heard it is going to receive some assistance in developing a strategy to enhance the river which has been designated as a waterways trail.

That assistance is coming from the National Park Service and Randy Thoreson.

Thoreson, who was one of the people on the tour, assisted the Green Corridor leadership in submitting an application for technical assistance through the park service Rivers and Trails Conservation Assistance program. It was notified earlier this fall the application it had submitted had been approved.

So, over the next two years or so Thoreson is going to be working with the Green Corridor Project board and other invested individuals and groups to determine ways to best utilize and enhance the river trail.

Thoreson was so impressed with what he saw from the local group he submitted them for an award handed out by the Mid America Trails and Greenways organization.

That group, which met for a conference in Michigan earlier this year announced it was presenting that award to the Green Corridor Project for its efforts, as well as for its vision.

"I am very excited about what is going on here," said Thoreson, this past Thursday – December 10<sup>th</sup> – afternoon when he presented the award to the board.

The award, he said, is a real feather in the cap of this organization, as it continues to work toward reaching its goal.

That goal is to make what it is calling the green corridor of the Minnesota River a place people from all over come to visit.

That corridor is a stretch of the river from Granite Falls to Fort Ridgely State Park.

Green Corridor board member Loran Kaardal said in the future he hopes people will refer to the Tatanka Bluffs area and the green corridor as a place they visited, just like people like about the Brainerd Lakes area or the North Shore – a vision he believes can happen sooner rather than later.

Thoreson said the project is a two-way street, as he is working with the board to develop the water trail portion of the much larger watershed vision.

That, said Thoreson, begins with the development of a strategic plan which includes a specific schedule of when things should be accomplished.

The benefit of developing this water trail, said Thoreson, is getting the word out about the region.

For Kaardal and the board, the effort to enhance that green corridor is about improving the quality of life in the region.

There are six members on the board, including Kaardal, Robin Nesburg, Joel Harmoning, Tom Hollatz, Clint Knorr and Jim Doering. Brad Cobb serves in an advisory role for the group.



Cobb has been an asset for the group as they seek out funding from different sources, such as the Legislative-Citizens Commission on Minnesota Resources (LCCMR) which had allocated \$1 million to the green corridor for land acquisition one year ago.

The group has also received funding from the outdoor legacy funding program, which gets funds from a recently approved increase in sales tax.

Kaardal said the group was very close to closing a deal on a 60-acre parcel near Fort Ridgely state park that would enhance the already existing 15-acre set aside for trails. The grant funds also allowed the group to acquire land north of Delhi, and there are other pieces the group is looking at.

Continued on page 10

## **INTEGRATED STUDY OF MINN. RIVER BEING LAUNCHED**

*By Tom Cherveney, West Central Tribune*

There has been no shortage of desire when it comes to cleaning up the Minnesota River, but there has been plenty of disagreement over how best to do it.

Now there is the promise of seeing all the needed technical data collected and modeled in a way to make possible the best decisions on how to achieve the goal.

The U.S. Army Corps of Engineers, St. Paul district, is launching an integrated watershed study of the Minnesota River. Its objective is to provide a thorough, technical analysis of the sprawling basin and offer models showing how best to meet water quality goals within it.

Congress recently appropriated \$350,000 to launch the integrated study, which is estimated to eventually cost \$8.4 million, according to Mark Wyatt, project manager with the Corps of Engineers in St. Paul.

Wyatt is in the early stages of developing the framework for the study. He would like to see the study completed in four years, but cautioned that its pace will depend on annual appropriations by Congress.

The Corps of Engineers will be working in partnership with the Minnesota Environmental Quality Board. The state is providing aerial reconnaissance data that will be used to develop a very detailed, topographical analysis of the basin and land use practices in it.

Of course, lots of data have been collected through the years on land use and water quality issues within the 16,770-square-mile basin. Wyatt said that information will be collected along with new data and used by the Corps to develop effective models.

They can be used to identify opportunities for improving the basin, and predicting the results of “what if” scenarios. For example, the model could someday be used to analyze the benefits that would be achieved by steps to improve vegetative buffers along the Blue Earth River. The tributary is one of the largest sources of sediment to the Minnesota River.

Along with the ability to develop effective models, the Corps also offers the expertise and resources to examine the role of groundwater within the basin. Groundwater and its importance to the river is one area where only limited research and data have been completed to date, he said.

While the study is technical in nature, Wyatt said the process will involve lots of public input. The Corps of Engineers will be working with the Minnesota River Board to help coordinate the work. One of the challenges, Wyatt said, is developing a cooperative approach in a basin that includes all or parts of 37 Minnesota counties as well as parts of South Dakota and Iowa.



*Minnesota River near North Redwood*

*River Rendezvous continued from page 1*

Department of Natural Resource fish specialist Chris Domeier, for example, will be beside a dam explaining how dams impact fish. Mussel expert Mike Davis will be in the river showing off various species as he talks about them. Geologist Carrie Jennings will be standing on or beneath the rock formations as she explains the role glaciers played in the valley’s origins.

And Kudelka expects the system will provide options for people to ask those experts more questions beyond the 500 that will be answered on the video.

“That’s their job and they enjoy doing it,” he said.

In addition to being online, the system will be available at kiosks at the participating schools and at four other sites along the valley – the Treaty Site History Center in St. Peter, the Ney Nature Center near Henderson, the Regional River History Center in New Ulm and the office of Clean Up the River Environment (CURE) in Montevideo.

While the term “field trip” is associated with school children, the site will aim to serve all ages. But the willingness to embrace new media should bring in younger generations accustomed to learning on the Web, Kudelka said.

Whether people see the information at school, at home or at a nature or history center, the hope is they will be intrigued enough to take a closer look – in person – at the river.

“The next step is to experience the resource on your own,” he said.

Assuming the Legislature approves the LCCMR’s recommendations in the legislative session starting in February, money should flow to the Water Resources Center in August. Officials there hope to have the Web site up and running by the middle of 2011 and continue to add to it the months and years that follow.

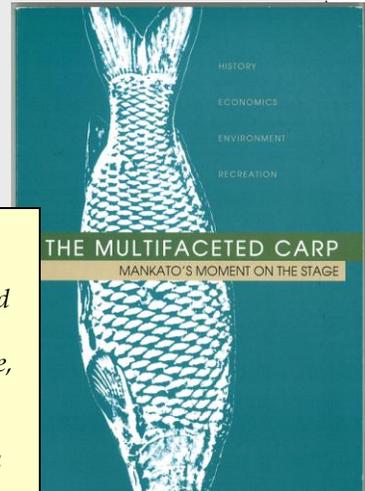


Tom Kalahar standing in a CREP area

**Book Review: The Multifaceted Carp by Henry W. Quade**

*Carp represent the most disdained, misunderstood and under-utilized fresh water fish group in the United States. Economics, environmental impacts and recreational use are all important overlapping components of our understanding and perception of the multifaceted carp. Within and among these components are policy, economic and group conflicts which have varied over time. Further, carp are viewed very differently in other countries.*

Former biology professor at Minnesota State University Mankato and founder of that institution’s Water Resources Center, Henry Quade wrote this book because of his interest in a Mankato cannery processing carp as food during and after World War II. This book covers the history, economic, environment and recreation aspects of the multifaceted carp.



*The history of carp in this country has been a series of swings from respect to disdain. First introduced into US waters by the government as a popular immigrant food source, today carp is considered by some a valuable recreational and food resource and by others a pest and a danger to the environment.*

*That carp are mostly despised rather than prized in the United States relates to environmental concerns and perceptions, whereas throughout the rest of the world, economics, as the driving factor, results in a positive perception. In the United States carp are blamed for a decline in sport fish stocks and waterfowl and a decrease in water quality. In contrast, today in Europe carp are preferred for sport fishing, as popular as bass are in the United States. Since Old World fish farmers had relied on carp for centuries, the immigrant farmers welcomed these fish when the U.S. Fish Commission first brought them to North America.*

*The multifaceted carp has had many other uses in the past that show great potential for the future. Carp have been used in art for centuries in Japan, using the art of fish rubbing “gyotaku.” Carp can be tanned into exceptional leather for skirts, handbags and accessories for high fashion. They are becoming a more popular sport fish for both angling and bow-fishing. They have been used as fertilizer for many years. Carp are being used as food for pets, turtle farms, mink farms and feed lots. In the future, biomanipulation and ecotechnology have the potential to develop many new uses in eutrophication control, aquaculture and waste treatment.*



We experienced one of those interesting and unusual autumns with a dry and warm September smashing head-on into one of the wettest Octobers ever. Many farmers just got into their fields to start harvesting soybeans when a deluge of rain hit across the Minnesota River Valley. With colder than normal temperatures people felt cheated out of the traditional Indian Summer. Only November arrived bringing warmer temperatures and clear skies.

Now with the end of December catching up quickly with the New Year we have just experienced a massive storm front drop a foot or more of snow throughout the basin. The rivers have frozen over along with any thoughts of paddling until spring arrives. This isn't stopping the Minnesota River Watershed Alliance from moving forward with its initiative to develop a Paddler Program. As we speak the committee is making plans for a late spring or early summer launch with a paddle on the Blue Earth River.

I like winter - it is by far my favorite season especially getting outside to cross-country ski or snowshoe in a quiet forest with no other

human around for miles. There is no better way to enjoy a 30-below temperature than to push yourself hard by skiing across a frozen landscape as the body begins to sweat. For many people, winter is a time of complaining about the cold and hibernating somewhere warm. Get outside to participate in a Christmas Bird Count or a spirited game of hockey. After all, isn't this why we live in Minnesota, part of the Great North?

Before the snow really began to fly I made it out to Dawson at the end of November to see the progress of the dam removal project on the Lac qui Parle River and interview Chris Domier of the Minnesota Department of Natural Resources. Chris has led the effort to take out this low-head dam and build a series of rock weirs to allow fish migration upstream for the first time in nearly a century. In addition, experienced paddlers will be able to enjoy a set of constructed rapids as they float toward Lac qui Parle State Park.



When the spring thaw begins sometime in March or April make a trip out to Dawson to see this amazing sight and start preparing for a season of paddling in the Minnesota River Basin. We only have a few more months of winter left.

### Clearing the muddy Chippewa continued

He cited a case in the Zumbro River watershed where a citizen's campaign led Olmsted County to enforce laws that require vegetative buffers along waterways. The buffers capture sediment and nutrients and can greatly improve water quality.

It's not known how many miles of waterways in the Chippewa River are in violation of public water and ditch laws, according to Wymar.

The Minnesota Pollution Control Agency is in the process of developing its plan for reducing sediment in the Minnesota River, according to Katherine Pekarek-Scott, project manager for the Chippewa River watershed with the MPCA. It's too early to know how the plan will affect the Chippewa River's clean up strategy, she said, but added: "Stay tuned."

### Green Corridor Project continued

Cobb emphasized the group is working only with landowners who are willing to talk about the transfer of land. That land is typically put into some other program, such as Reinvest in Minnesota to ensure it remains public land into the future.

Kaardal expanded the vision of the green corridor as he talked about bringing people from the metro areas of the state out to the region by way of passenger trains, which would take them all the way to the start of the green corridor area.

From there, he envisions them hopping on their bike or crawling into a canoe and heading down the river.

The group is well on its way to making that a reality, said Thoreson, and he is now part of the equation to help take what the Green Corridor Project group already has done to the next level.



### Christmas Bird Count

In late December, a number of birders gathered in New Ulm for the annual Christmas Bird County. They spread out early in the morning across a 15-mile radius to count birds as part of a national effort to



compile scientific data of bird populations. From December 14<sup>th</sup> through January 15<sup>th</sup>, thousands of volunteers across North America participate in designated “count circles.” The original Christmas Bird Count took place in 1900 as a positive alternative to the traditional Christmas “side

hunts.” Last year the New Ulm Bird Count came up with 39 different species and a total of 4,572 birds.

### Gustavus Wind Turbine

Gustavus Adolphus College suffered a setback in their dream to build a wind turbine on the St. Peter campus. The administration is looking to put up the turbine west of the Linnaeus Arboretum to be used as a teaching tool by allowing students to have easy access and be able to connect it with the college grid instead of having to sell the power on the open market. Nicollet County rejected the permit because of rules requiring turbines of this size to be located a half-mile – 2,640 feet – from a residence. The Gustavus turbine would only be 1,848 feet.

### Minnesota River Trail

Numerous efforts have been launched in the last few years to build trails in the Minnesota River Valley including one from Mankato to St. Peter. Recently, citizens of Fairfax, Franklin and Morton began the planning stage to build trails in Renville County. One proposed trail would go from Fort Ridgely State Park to the city of Morton. Other ideas for trail designations included Birch Cooley State Park and the horse camp south of Fairfax. Ultimately, the idea behind the trail plan is for each city to have its own trail loop hub and connected to a larger trail system extending to neighboring counties and cities. This trail development could help Renville County become a designation for travelers.

### New farming practices continued

“Carbon legislation can really affect that,” said Dontje. “Because those kinds of efforts will become very valuable if we truly account for the cost of carbon in the system.”

But many farmers say the proposed climate legislation will increase their cost of doing business. Among them is southern Minnesota farmer Lawrence Sukalski.

Sukalski checked on the corn he has stored in one of his bins, to make sure there’s no mold growing on it. Sukalski keeps close track of the corn because it’s one of his major moneymakers. He’s worried the global warming legislation could change that.

“If it passes we’re going to have Europe-style food prices and Europe-style fuel prices,” said Sukalski. “Everything will be so high you won’t be able to do anything.”

Including making a profit on the farm. Sukalski said the climate bill will force petroleum refiners, the electricity industry and others to spend money on reducing greenhouse gas emissions. He said those costs will be passed on to consumers, including farmers, in the form of higher energy prices.

Sukalski doubts that farmers will be able to offset those higher costs with money made from sequestering carbon on their land.

“I am not sold that this will make money for the farmers later on down the road,” said Sukalski. “There’s just too many things to it; it’s too complex.”

Recent research shows just how uncertain the economics of carbon sequestering are. Many people thought “no-till” farming would trap large amounts of carbon in the soil. In no-till, farmers open a thin furrow for the seed but leave the rest of the surface unplowed. The theory was the practice reduces the amount of soil-based carbon escaping into the air compared to conventional plowing.

Deborah Allan, a soil scientist at the University of Minnesota, said her research fails to show that’s true. “I feel pretty confident that for Minnesota it’s not going to be a net gain in carbon in a no-till situation,” said Allan.

But even if no-till does not pay off, Allan said there are plenty of other ways farmers can hold carbon. Planting trees or perennial crops, like alfalfa, or Carmen Fernholz’s tillage radishes, could be additional components to reduce carbon and prevent the consequences of a too-warm planet.

“It’s on my mind all the time,” said Fernholz. “It’s just sometimes you feel a little bit frustrated that you can’t do more.”

That frustration is something both sides of the farm debate over global warming are feeling. For some, like Fernholz, the fight against global warming is moving too slowly. For others, the pace is too rapid, and they fear it will do long-term damage to the job of producing food.



# CONSERVATION THOUGHTS

## Paul Gruchow – “Gneiss Outcrops SNA”

“From a slight rise in a pasture, the scenery is pastoral: a farmyard to the right; fenced grasslands, piles of field stones, and croplands to the left; behind the wooded rim of a valley; ahead, an airy river-bottom forest. High in the crook of a big old oak, a raccoon sleeps away the day.

“And then, coming up a draw, I suddenly find myself at the edge of a narrow, sparkling lake, contained between parallel cliffs of stone some 50 feet high. I grew up scarcely 20 miles from this place. I never dreamed that such a landscape as this, a canoe country scene, existed within reach of my prairie bluff house.

“Gneisses are metamorphic; they began as something else. Those in the Minnesota River Valley started as sedimentary and volcanic rocks that were cooked, folded, injected, and pressed down, over and over again, until they took their present, distinctively banded form – parallel slabs of pink and red rock (granitic gneiss), gray to black ones (horn-blende-pyroxene gneiss), and dark gray ones (garnet-biotite gneiss), like landscape-sized slices of layer cake. Nothing seems more immutable than rock, and yet even it bears news of violent and creaseless change over the vastness of geologic time.



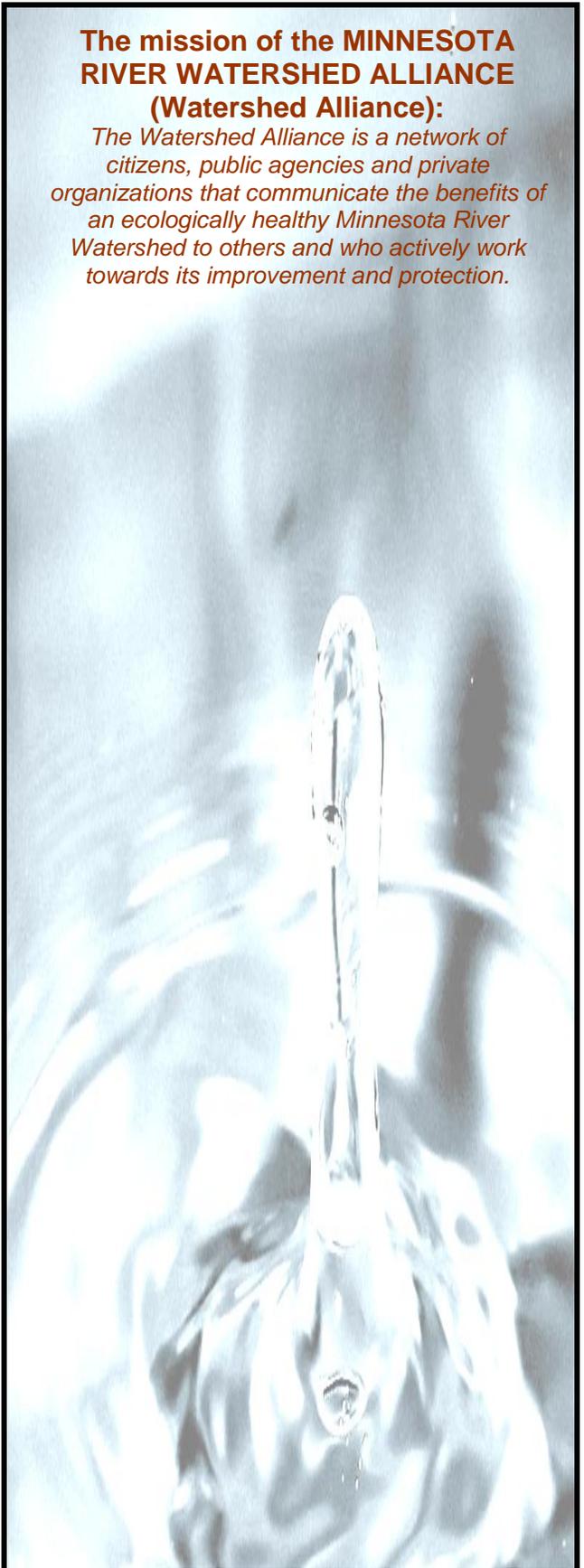
**Described as Minnesota’s contemporary Thoreau, Paul Gruchow grew up on a small farm near Montevideo and wrote six books about the natural world.**

“The Minnesota River Valley itself is, in the vicinity of Granite Falls, a couple of miles wide and 100 feet deep; elsewhere it reaches as much as 5 miles wide and 250 feet deep, a dramatic gouge in the otherwise flat or gently rolling landscape of central and western Minnesota. The Minnesota River, compared with its valley, is a diminutive flowage, circling now west, now south, now east, now north around the gneiss outcrops within the confines of the towering banks, like some small creature pacing in a giant cage. The Minnesota did not carve the valley; it wanders in the cavernous footprint of its precursor, the River Warren, which drained Glacial Lake Agassiz some 9,000 to 12,000 years ago (Warren was Gen. G.K. Warren, an army engineer who first described the origin of the valley.) Geologists, in their rich nomenclature, call the Minnesota an underfit river.”

*Entire article found in the Minnesota Volunteer, November-December 1994 issue.*

## The mission of the MINNESOTA RIVER WATERSHED ALLIANCE (Watershed Alliance):

*The Watershed Alliance is a network of citizens, public agencies and private organizations that communicate the benefits of an ecologically healthy Minnesota River Watershed to others and who actively work towards its improvement and protection.*



Questions and comments on the River Talk newsletter can be directed to: Scott Kudelka; Water Resources Center; 184 Trafton Science Center S; Mankato, MN 56001; 507-389-2304 or [scott.kudelka@mnsu.edu](mailto:scott.kudelka@mnsu.edu)