Summer 2008
Vol. II Issue 2

RIVER TALK

THE MINNESOTA RIVER CURRENT

"Big Stone II Coal Plant"

Introduction

Not only has the proposed construction of the Big Stone II power plant, located across from Ortonville in South Dakota, stirred up a debate on how each of us looks at the Minnesota River but also how this coal-generated plant could affect our daily life.

Citizens, legislators and organizations are concerned about the plant's impact on reducing water flow from the Big Stone Lake, increasing mercury pollution and our standard of living here in the Minnesota River Watershed.

For those on the other end of the spectrum, Big Stone II represents economic development and stable electrical prices. Local businesses, unions and power companies see the plant providing high wage jobs and a way to meet rising energy demands.

Emotion has run high on both sides as people express their view points on climate change, water quality and alternative energy sources including wind generation. As we have seen in other parts of the country, this is only the beginning of the debate.

Endangered River

On April 17th, American Rivers named the Minnesota River as the 5th most endangered river in the United States. According to this national river organization, the threat comes from the proposed construction of this $1.6 billion coal-fired power plant known as Big Stone II at the river's headwaters.

Community leaders including state representatives and senators, along with nonprofit groups came together at the State Capitol to express their issues about the Big Stone II plant and their concern for the Minnesota River.

Scott Sparlin, Executive Director of the Coalition for a Clean Minnesota River spoke passionately about the Minnesota River and the consequences on water resources.

"Since 1989, we've worked hard to educate and raise awareness about the condition of the Minnesota River. Together with our significant partners in business, government, and the nonprofit sector, we have achieved numerous successes and have met challenges head on in our efforts to heal and improve water in the Minnesota basin."

"Reconvene the MN / SD Boundary Waters Commission. Can we talk this through with our good neighbor? I'm sure they have a telephone in Pierre."

Minnesota River Press Conference

He related how in the last five years there has been a noticeable increase in fishing activities on the Minnesota River to an over-flowing room of media, legislators and citizens. "We now have walleye, sturgeon, white bass, American eel, and even our native paddlefish."

At the end, Scott talked about how the job isn't completed and "work needs to be done and new initiatives need to be taken to ensure continued healing of the river. But if we allow actions that compromise our strides forward, what do we leave behind for our younger people? What do we tell tourists that have been coming to our communities in the future?"

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DID YOU KNOW?

The Minnesota Department of Transportation (MN DOT) used a World War II-era nerve can launcher to fight hillside erosion. Clocking in at more than 220 mph, the gun pounded 20-foot hollow steel rods into roadside shoulders washed away during last summer's flood in southeastern Minnesota.

Originally designed in World War II by Great Britain to shoot nerve gas cans at the enemy, the launchers never saw combat. After being declassified the U.S. Forest Service used the weapons to build retaining walls in the 1990s. Now they are owned by Colorado-based, Soil Nail Launcher.

A two-ton red machine hooked to an excavator with pressurized chambers fired the hollow bars into a highway embankment with great visual effects. According to Colby Barrett of Soil Nail Launcher Inc., "the hollow bars will stay in the ground and act like drains. Some will be topped with plastic mesh and filled with grout for additional protection."

For MN DOT it meant saving money through the launcher's quick application and also less soil disturbance. Chris Dulian of MN DOT stated the gun shoots 100 nails a day, resulting in a savings of 30 to 50 percent.

Since 2001, the company has used it for erosion control in 22 states, New Zealand and Canada. Here in the Minnesota, they repaired areas of Hwy 14 and Hwy 61 near Dresbach and Hwy 76 near Houston.

The operator of the launcher said the machine may look and sound intimidating, but its "controlled chaos." (Source: "World War II weapon used to fight erosion" – Winona Daily News by Amber Dulek)

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Join the Watershed Alliance's bulletin board to receive regular updates on what is happening in the Minnesota River Watershed at
http://mail.mnsu.edu/mailman/listinfo/mrwa

"A Beautiful Day at the Gneiss"

On June 14th, seventeen people gathered at the Gneiss Scientific and Natural Area (SNA) near Granite Falls for a hands-on hike into the granite outcropping world of the Minnesota River. Led by local photographer and naturalist Ron Bolduan, everyone enjoyed a beautiful day with perfect temperatures and no mosquitoes.

Ron has become an expert on the Gneiss SNA after years of exploring the area and shooting photos of its natural features, plant life and wildlife. In the 50 or so trips to this site, he has only seen one other person. This is why Ron relishes his time out here among the granite outcroppings, Great Plains prickly pear and diverse landscape.

This natural lake is found between two granite outcroppings and near the Minnesota River at the Gneiss Scientific and Natural Area near Granite Falls.

This hike was sponsored by the Minnesota River Watershed Alliance (Watershed Alliance) to provide an opportunity for people to connect with the outdoors around them and hopefully develop a deeper appreciation of the natural environment. The Watershed Alliance recognizes the need for events like this one and others to showcase the beauty of the Minnesota River Valley.

As one of the amazing natural areas found along the Minnesota River, the Gneiss outcrops formed approximately 3.6 billion years ago. They are among the oldest known rocks on the earth's surface and can be identified by its light-colored, pink to red. The Gneiss SNA also features a natural lake between two major rock outcrops, the very rare brittle cactus and many other rare plants.

Not only did the participants of the hike enjoy the terrain diversity, they were taught basic techniques for shooting photos of the world around them. Ron 's work for the MN River National Scenic Byway is well known and he has become a fixture in the environmental education fields showing kids of all ages artifacts of the river.

Granite rock outcroppings are under constant threat as the construction industry searches for new material to build our roads, homes and other modern civilization features. Under a growing pressure for raw materials, these areas could easily end up like our native prairie – 99% plowed under or our wetlands – 95% drained.

Conservationists in the Minnesota River Valley have begun to point out, once the granite rock is mined it's gone forever, we aren't going to get to back. To help protect some of the granite outcroppings and attached wetlands, the Renville Soil and Water Conservation District (SWCD) secured a grant from the Legislative-Citizen Commission on Minnesota Resources (LCCMR) to protect up to 200 acres of rock outcrop complexes in the riparian corridor.

The $563,000 in funding secured from LCCMR was used to pay for perpetual easements. This means the landowner continues to own the land but is restricted from making any landscape changes. According to Tom Kalahar of Renville SWCD, all the money was spoken for within ten minutes. "The pressure on the granite outcroppings in the future is going to be intense," said Kalahar. "We need to sit down to figure out what we want this valley to look like in the future."

Kalahar and Ron Bolduan worked together to present a photo show and discussion on why the granite outcroppings and wetlands are worth saving and protecting. Many of these areas hold unique plant and animal species found nowhere else in the state. A good share of these granite outcroppings are found in the Minnesota River Wild and Scenic River corridor. Because of this designation, landowners aren't allowed to mine their property but also don't receive any compensation for being part of the special classification.

Ron Bolduan provides a few tips for shooting photos of wildlife and plant life in the Gneiss Scientific and Natural Area.

"Looking for changing clues"

Quest for answers begins with Minn. River

By Tom Cherveny,
West Central Tribune

MONTEVIDEO – Like an investigator probing for clues, Carrie Jennings tipped over stones, shifted soil through her fingers, and compared what she saw on the landscape with the maps she carried.

She was searching for clues left here when the last glacier retreated 10,000 years ago, but her 1965-dated map also revealed how much has changed in recent years. Her map showed a landscape smattered with wetlands of different sizes and shapes. We saw tilled fields of dark, rich loam.

The changes were witnessed by Mark Dahl, a member of the Chippewa County board of commissioners. His family once farmed the Sparta Township soil that now fell through Jenning's fingers like sand in an hour-glass.

One-half of the land that surrounded us was too wet to farm when he was growing up, Dahl told Jennings. He recalled how he used to escape the summer heat as a youth by jumping into a pool of water just a short walk from his house.

It disappeared in 1976 when a ditch was opened. Gone too are the dairy farms and grass pasture lands that once filled much of the township.

Jennings, a geologist with the Minnesota Geological Survey, led an entourage of nine on a geological tour of the Minnesota River Valley near Montevideo in early May. She is trying to find answers to a mystery.

We have made great strides in reducing the sediment that washes into the river from our farm fields and urban landscapes. Yet the Minnesota River is carrying a sediment load to the Mississippi River at a rate that is 10 times-or-greater than what it would naturally be. Lake Pepin, on whose waters Ralph Samuelson invented water skis in 1922, is fast filling with silt as a consequence.

Small tributaries to the Minnesota River such as Stony Run Creek shown here are still responding to the sudden and dramatic carving of the river valley by Glacial River Warren. The waterways are adjusting their gradient to the deeper valley that was created when the waters of a glacial lake larger than all of the Great Lakes today suddenly began pouring south.

Knowing what happened on this landscape 10,000 years ago, and what is taking place today, are equally important in understanding the mystery that Jennings hopes to solve.

Two men with a passion for conservation, Dick Unger and Del Wehrspann, had bid $450 at a silent auction to benefit the citizens group Clean Up the River Environment when they learned that Jennings had offered to lead a geological tour of the Minnesota River Valley.

Unger is working to restore a river backwater near Wegdahl that early explorers once described as holding the largest bed of wild rice in this part of the state. It was an important feeding stop for migrating waterfowl. It still is, although the wild rice is long gone. In the spring, the backwater swells with water to form a small lake. This year, Unger said the first big wave of waterfowl arrived in such prodigious numbers that he watched the water rise by an inch.

Wehrspann has witnessed similar signs of revival in the Minnesota River, where he spends as much of his spare time as possible fishing and exploring. He has seen improvements in water quality due to conservation land programs and best management practices on the land.

Jennings devoted many hours to researching the geology of the Upper Minnesota River Valley more than a decade ago, and has kept returning ever since. She told those who joined the tour that she is motivated by the passion she finds in people here for the river valley, and by her quest as a scientist to find answers.

Why is it that the Minnesota River delivers only 25 percent of the flow to Lake Pepin, yet is responsible for 85 to 90 percent of the sediment load?

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"Chaska to Hudson Bay"

What is the recipe for adventure few other people would take on? For my two cents on the subject, I'm going to go with two young men, the book "Paddling with the Cree" and an ability to trust your own instincts.

If you haven't heard yet, Sean Bloomfield and Colton Witte of Chaska paddled a grueling 2,250 miles from their home in Chaska on the Minnesota River all the way to York Factory, on Hudson Bay in Manitoba, arriving June 15th.

On a chilly spring day in late April, Witte and Bloomfield said goodbye to family and friends before pushing out into a swollen Minnesota River. The two graduated early from high school to take on a challenge few others would think of trying.

Forty-nine days later and enough stories to last a lifetime, they floated into the Hudson Bay and say an endless horizon starting at them. They celebrated the end of their journey alone with two cheap cigars and sang like two voyagers should.

During the trip, they ate moldy pizza, suffered a short delay when Witte ended up in the St. Peter Hospital and meeting many new friends. Bloomfield and Witte survived the big waves of Lake Winnipeg, a nasty dose of pepper spray and hard paddling on the Minnesota.

On the Minnesota River

As anyone knows, paddling upstream is no fun. To do it during rising flows, against a strong current, and winds can break your morale. On top of it all the rain kept falling and temperatures continued to stay cool. Adding to their misery, Witte spent time in emergency room because of food poisoning and dehydration.

Here are a few of the memorable parts of Bloomfield and Witte's time on the MN River:

- The mayor of Redwood Falls presented them the keys to the city,
- Upper Sioux Chairman Kevin Jensvold gave the boys a ride to town and offered sweet grass for their journey,
- They expressed their disappointment about the pollution in the Minnesota River to West Central Tribune writer Tom Cherveny, especially in the lower reach.
- The kindness of strangers, including hanging a lantern to guide them around MN Falls dam.

Canoeing with the Cree

Influenced by the book "Canoeing with the Cree" written by Eric Sevareid, Witte and Bloomfield were able to do the trip in 49 days compared to the 98 days it took Sevareid and Walter Port in 1930.

In order to make the trip in record time, they paddled long days, including once for 24 hours on the Red River as they traveled 90 miles. To accomplish this marathon session one paddled for 12 hours while the other slept in the canoe.

Sevareid and Port left Minneapolis on June 17th with a .22-caliber rifle, copper-tipped paddles and no idea what waited for them after Winnipeg, Manitoba. Along the way they were paid $100 by the Minneapolis Star to write dispatches about their adventure. They arrived at York Factory on September 18th.

Colton Witte and Sean Bloomfield at the end of their 2,250 paddle trip at the York Factory in the Hudson Bay.

The End

When Witte and Bloomfield took off on April 28th snowflakes were falling out of a dark sky. At the end of their trip they were stuck an extra day at York Factory when the float plane couldn't pick them up because of snow.

Over the last part of their incredible journey, Bloomfield and Witte survived dangerous rapids, swamping of their canoe and experienced a second bout of winter. They arrived at Hudson Bay the polar bears were still out on the ice. Now back home in Chaska, they are getting ready to head off to college at Minnesota State University in Mankato. The two have already made plans for their next paddling adventure.

Sean and Colton shared their feelings about the trip to Reporter Dennis Anderson of the Minneapolis Star Tribune. Sean said travel adventure "makes you realize how easy life is at home, and how much little things don't really matter." For Colton it meant coming to understand more about yourself. "The trip left me with a feeling that I can do anything if want if I put my mind to it. It's very empowering, I feel that if I do my best, I can do it. A trip like that builds confidence."

For more information on this amazing trip: http://www.colton-seanhudsonbay.com/index.html

Voyage Down the Minnesota River

Ten years ago, Tim Krohn and John Cross of the Mankato Free Press journeyed down the entire length of the Minnesota River from the Big Stone Dam to Fort Snelling. They started on June 13th and eleven days later finished the entire 330 miles.

Along the way they discovered a river of extremes, interesting characters and water clarity levels that ranged from 40 cm to as low as 6 cm in the Mankato area after a 1 inch rain the day before. They took on this trip to learn more about the river at a time of heighten interest in the Minnesota and its water quality issues.

Photos courtesy of John Cross, Mankato Free Press

The two men started out at the source - Big Stone Dam and right off ran into nasty paddling conditions. *Our adventure canoeing down the Minnesota River lasted about 10 minutes. That's when we hit the first downed tree that we could not navigate around. Seeing no option, we stepped knee-deep into the river and hulked the loaded canoe over the tree.*

Back on the water they hit a worse snag only five minutes later. To see what they had got themselves into the two men walked downstream. *The sight made our hearts sink. Dozens of downed tree snags blocked the first couple of miles of river we walked along. But there was no going back now. We unloaded the canoe and begin to carry. That was how we spent most of the morning. Long and short portages, lugging gear and boat, stepping and slipping in stinky mud.*

After a long, tough first day it got easier for paddling and a 3-horsepower motor helped. Tim and John interviewed a number of people on their journey downstream with strong ties to the river, including Patrick Moore, who at the time headed the Land Stewardship Project and just opened the coffee shop "Java River."

Patrick talked about how the only way to improve the river was by altering agriculture. He felt the answer was smaller, pasture-based farming. *"It can't be done through regulation. It's really a cultural change. We need to move away from the current economy that requires dirty water that we try to remove as quickly as possible. We need to create an economy dependent on clean water and good wildlife."*

On day 7 of their journey, Tim and John left New Ulm bound for Mankato and found it to be one of prettiest stretches of the river. *Even the banks of the river seem more attractive here. Rather than caked mud, the banks turn from gravel to sand to long stretches of rust-colored shale and white-gray kaolin clay.*

In New Ulm they caught up with Scott Sparlin to talk about fishing on the river and his group Coalition for a Clean Minnesota River (CCMR). The group had been responsible for holding the first Minnesota River Rally, convincing Governor Arnie Carlson to declare the need for a swimmable and fishable river in ten years, and pushing for the implementation of the Conservation Reserve Enhancement Program or CREP.

In spite of the problem Sparlin sees in the river basin, he said it's important not to focus on the negative. "The good news is there is a lot of positive things going on. There's great momentum and people really do care about the river. I'm amazed, people just come up and ask, 'What can I do to make the river a little better? Just tell us, and we'll do it.'"

One of the major themes with this paddling trip revolved around the issue of water quality and the cause for excessive pollutants like sediment and nutrients in the water. This included the work of the newly established Minnesota River Basin Data Center by Henry Quade, a biology professor at Minnesota State University, Mankato.

"It's going to be fantastic when it's up and running. You can't accomplish things without good information that people can agree on. Without good studies and data, you can just waste money on projects that maybe don't do what you think they will," said Ralph Malz, Scott County Commissioner.

Tim Krohn and John Cross finished their voyage down the Minnesota River by camping next to the Interstate 35W bridge. *Reaching the end of the Minnesota river where it flowed into the Mississippi River was almost anti-climatic. The truth is, we missed it.* Their journey came to an end on Harriet Island.


End – MN River meets Mississippi

Today, Tim and John continue to work for the Mankato Free Press and are going down the Minnesota River again to celebrate the 10th anniversary of their original trip. This time the public will be able to follow their progress on the internet and they hope people will join them for parts of the journey.

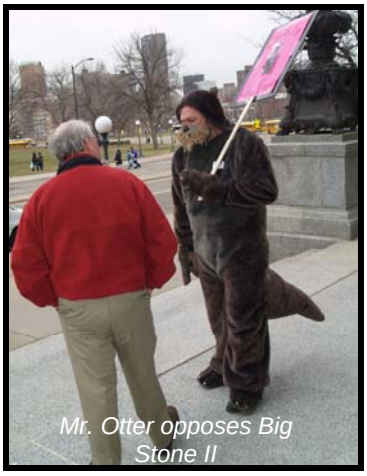
Big Stone II Coal Plant continued

Water Drawdown

As with any industrial plant, Big Stone II will need a lot water. A lot of water – 3.2 billion gallons of water or 20% of flow from Big Stone Lake. In addition, the power plant has permission to take 3.2 billion gallons of water from the Veblen Aquifer during drought conditions. During dry periods the result could be devastating to the lake as well as the Minnesota River since this aquifer is a source of water for Big Stone Lake.

Models developed by Barr Engineering show lake levels will drop 6 to 12 inches several times over a ten-year period. The drawdown of this much water will increase the potential for winter fish kill, elevated water temperatures, increased algal production and create conditions harmful to downstream ecosystems, according to hydrologists with MN Department of Natural Resources.

Minnesota had no say during the process of appropriating 6.4 billion gallons of water despite its overreaching impact on the Minnesota River. There has been a call for reconvening the South Dakota – Minnesota Boundary Waters Commission by groups like Clean Up the River Environment, individuals and the Minnesota River Board to review the complicated issue of water rights. Unfortunately, there has been no response from Governor Pawlenty.


Mr. Otter opposes Big Stone II

"Imagine if a Wisconsin company was to withdraw 20 percent of Lake Pepin's annually without asking for Minnesota's permission," stated Duane Ninneman of Clean Up the River Environment (CURE). "This is what Big Stone II plant intends to do on Big Stone Lake on Minnesota's western border," Ninneman added. "Big Stone Lake home owners and the downstream Big Stone National Wildlife Refuge could be severely affected in times of drought and low water flows."

Transmission Lines

Minnesota becomes a major player on the fate of the Big Stone II Coal Plant through its Public Utilities Commission. This five-member commission will make a decision on whether two new transmission lines need to be built in the state. The five utilities building the plant have publically stated the project wouldn't be able to move forward without these lines to carry nearly half the generated power into west-central Minnesota.

"We feel it's appropriate to call the governor to action and alert him that the Minnesota River is now the fifth most endangered river," pointed out State Representative Aaron Peterson of District 20A. "Hopefully, this will be a concern the Legislature will take seriously and the Administration will act on in the near term." Peterson said the state passed the largest renewable energy standard to deliver a different generation of power on its transmission lines. "My generation thinks there is a different way to do this," Peterson stated.

In a packed board room and after five hours of debate involving both sides of the issue, the Minnesota Public Utilities Commission voted on June 5th to put on hold the decision to build the new transmission lines. Three of the commissioners want to hear from an independent expert on future costs of construction, carbon emissions and natural gas. After the dust settled, Michael Noble, director of Fresh Energy, said "Four years worth of debate couldn't persuade the commission today to approve this plant. It's too risky, too expensive and not consistent with the energy needs of this century."


Paddling the Minnesota River near Granite Falls

10 Most Endangered Rivers by American Rivers

1. Catawba-Wateree – outdated water-supply management,
2. Rogue – logging and road construction,
3. Cache La Poudre – water diversion and reservoir project,
4. St. Lawrence – outdated management plan,
5. Minnesota – proposed coal-fired power plant,
6. St. Johns – Unsustainable water appropriations,
7. Gila – water-development project,
8. Allagash Wilderness – loss of wild-and-scenic-river protections,
9. Pearl – irresponsible floodplain development,
10. Niobrara – unsustainable irrigation diversion.

LOOKING FOR CHANGING CLUES continued

Jennings has found some of the most important clues to the answer in Redwood Lake, which was created by a dam built in 1902. It only took 100 years to fill the lake with 28-feet of sediment, she said.

The layers of sediment can be read like chapters in a history book. Prior to the 1930s, about 80 percent of the sediment was soil washed from farmed fields. The elimination of nearly all of the native prairie and farming practices in the pre-Dust Bowl years were to blame.

Today, we've reduced the contribution of sediment from farm fields to about 20 to 25 percent of the load carried in the river, according to Jennings.

Scientists believe the majority of sediment today is coming from the banks of rivers and streams, but that's where the questions only begin. Is most of the soil sloughing from the bluffs of big, steep banks like those found on Hawk Creek?

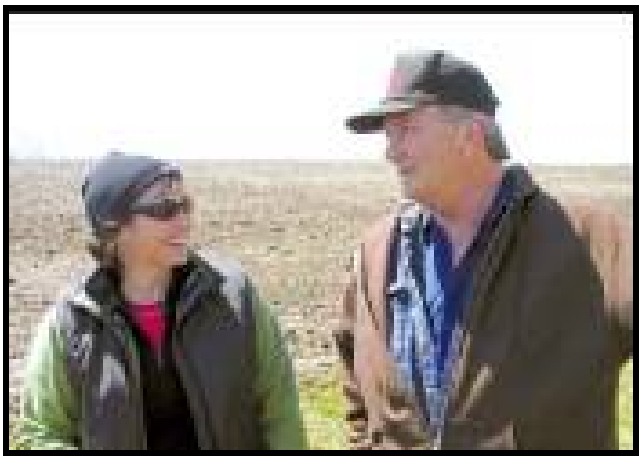
Or, is the sediment coming from the low. Soft banks of smaller tributaries like Shakopee Creek?

Or, it's just as possible that the biggest share of the sediment loads is actually coming from the much smaller ravines that feed into all of these streams.

Geologist Carrie Jennings, left, Dennis Pederson, center, and Del Wehrspann compare the landscape they see with a 1965-vintage U.S. Geological Survey map that shows where many wetlands once existed. Jennings led a tour that looked at the landscape's glacial legacy and the changes we have made.

The modern drainage systems that make the land so productive for farming are believed to be accelerating the rate that this sediment is being moved, said Jennings.

She said the river valley is very young in geological terms. Much of the sediment now being carried is the material that naturally resulted from the cataclysmic event that created the valley 10,000 years ago. Glacial Lake Agassiz – a water body far larger than all of today's Great Lakes combined – suddenly began pouring south. Glacial River Warren needed only a few weeks to carve what we now call the Minnesota River valley.



Jennings and Mark Dahl, Chippewa County Commissioner, discuss the changes he's witnessed to the landscape in Sparta Township of Chippewa County. Much of the original landscape here was created by scouring as melt water from the last glacier flowed south.

Ever since that event, the landscape and waterways have been seeking to adjust to the sudden change, to find equilibrium, said Jennings. The natural evolution for landscapes is for drainage systems to become more complex with time.

Myriad waterways eventually develop and carve the land and drain away the wetlands and lakes.

Modern drainage systems might be slowing the process by draining the land yet keeping the land relatively flat, kind of like keeping a puppy's face on an aging dog, said Jennings. Or, we might just be speeding up the aging process that will turn our landscape into something more akin to that found in parts of western North Dakota and Wyoming today, she said.

Dick Unger is hoping to preserve the Minnesota River Valley by restoring the backwater near Wegdahl. Unger said that previous owners had built dikes and installed a pump station so that the area could be farmed. Dahl said he remembered earning summer income as a youth by pulling weeds in the farm fields that replaced the shallow waters that had held wild rice.

Jennings said we are a long ways from knowing all the answers, but we do know that restoring areas like this matter. She pointed out that holding or slowing the flow of water where we can, adding buffers and finding ways to increase our perennial cover all serve to reduce the flow of sediments and preserve the landscape.

"Every little bit helps," she says.

Living Systems Project

A tremendous amount of time and resources have been spent to improve the Minnesota River. since the Minnesota River Assessment Project report was released in the early 1990's These efforts are beginning to pay off in several ways – cleaner river, increased recreation activities, economic development opportunities and political clout – for the basin.

The Minnesota River between Granite Falls and Redwood Falls.

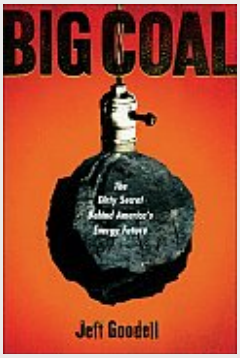
A coalition of groups in the Minnesota River Watershed have been working together to develop a Living Systems Project to continue this progress with improving water quality. The objectives of this project:

- Understand the Valley as a living system, integrating both the physical and societal dimensions of life there.
- Articulate a shared vision of what needs to be done, based on developing a common agenda.
- Develop plans for action and implementation.
- Embed community capacity for leadership to make it happen.
- Create an environmental social movement to sustain progress.
- Disseminate the process created to other geographic areas.

Implementation will be accomplished through a carefully developed network, turning the original 100 leaders to 1000 and beyond. This aspect of the project leverages leading-edge concepts of community organizing, communication, and leadership development in order to sustain what has been initiated. Eventually, it is anticipated, change will accelerate because eventually the entire community will become involved.

If you are interested in being one of the 100 community leaders for the Living Systems Project please contact: Scott Kudelka; 184 Trafton Science Center S; Mankato, MN 56001; 507-389-2304; scott.kudelka@mnsu.edu

Book Review: Big Coal – The Dirty Secret Behind America's Energy Future by Jeff Goodell



One of the triumphs of modern life is our ability to distance ourselves from the simple facts of our own existence. We love our hamburgers, but we've never seen the inside of a slaughterhouse. We're not sure if the asparagus that accompanies our salmon is grown in Ecuador or Oregon. We flush the toilet, and don't want to know any more. If we feel bad, we take a pill. We don't even bury our own dead – they are carted away and buried or burned for us.

You may not agree with what author Jeff Goodell writes about coal, but it's hard not to be impressed by amount of time and research he put into this book. Over a three year period, Goodell traveled across the country and even over to China to check out as many coal mines and power plants as possible. He also rode coal trains across the Great Plains and spent a month on a research vessel studying climate change in the North Atlantic. In this book, Goodell covers a lot of history on the coal industry and how it has affected the environment and people's heath.

Energy-wise, the fundamental problem in the world today is that the earth's reserves of fossil fuels are finite but our appetite for them is not. The issue is not simply that there are more people in the world, consuming more fossil fuels, but that as economies grow and people in developing nations are lifted out of poverty, they buy cars and refrigerators and develop an appetite for gas, oil, and coal. Between 1950 and 2000, as the world population grew by roughly 140 percent, fossil fuel consumption increased by almost 400 percent. By 2030, the world's demand for energy is projected to more than double, with most of the energy coming from fossil fuels.

Out of this, coal has emerged as the default fuel of choice. Coal has a number of virtues as a fuel: it can be shipped via boats and railroads, it's easy to store, and it's easy to burn. But coal's main advantage over other fuels is that it's cheap and plentiful. There are an estimated 1 trillion tones of recoverable coal in the world, by far the largest reserve of fossil fuel left on the planet. And despite a run-up in coal prices in 2004 and 2005, coal is still inexpensive compared to other fuels. In a world starved for energy, the importance of this simple fact cannot be underestimated: the world needs cheap power, and coal can provide it.

The high cost of gas, food and the basic essentials of life have people rethinking how they live, work and play. With gas over $4.00 per gallon and no sign of any relief, it is time to move beyond oil, coal and natural gas to more renewable sources of energy.

Right now there are a number of things people can do to reduce energy consumption.

- Start by conserving, which can be both simple and cheap. If every U.S. motorists cut back 10% of their driving, demand for oil would drop at least 1 million barrels a day.
- Better yet, reduce the speed at which you drive. Every 5 miles per hour decrease will save at least 20 cents per gallon at the pump.
- Bike or walk instead of driving. We have become a society where its too convenient to drive everywhere no matter the distance.
- Take mass transit. Living in a rural areas makes it almost impossible to take advantage of the mass transit system. This isn't true if you live in a metropolitan area like the Twin Cities or Mankato,
- Consolidate your trips by picking one day to run errands and plan out the most efficient route,
- To go even farther, buy a hybrid. These types of vehicles get better gas mileage because they run on gas and electricity.

Spring means getting out on the river to paddle, paddle, paddle. Even with the cooler temperatures it felt good to stretch out the muscles and see a different type of landscaping than the one out of your car.

Early in May, some of the Water Resources staff paddled a 12.5 mile of stretch on the Minnesota River from Courtland to Judson. The trip would have been shorter except I guided the group through a longer but more scenic oxbow.

The water level was high making for easy paddling except when a cold wind hit us head on. When we started out the temperature had reached a high of 60 and than proceeded to drop over twenty degrees by the time we climbed onto shore.

When you work in the water resource field it is worth getting outside to study rivers up close and personal. We see the differences between how man treats the natural environment compared to animals like the beaver.

Over this spring I have been fortunate to paddle another stretch of the Minnesota River. This time I went along with CURE on their MN River Historical Tour. I also got out on the West Branch Lac qui Parle and the Redwood rivers. Each time I discovered something new and came away with stronger connection to our rivers.


Jim Doering paddling the Redwood River

Del and the Minnesota River

If you have never met Del Wehrspann, you are missing out on knowing someone who has both a passion and love for the Minnesota River. Here are a few quotes Del shared with the Minnesota Environmental Quality Board on October 3, 1991.

In 1835, George Featherstonhaugh made a canoe voyage up the Minnesota River. He comments on the area as being one of the most beautiful and productive areas on this continent. He writes about the transparent waters of the winding, gently flowing Minnesota River. He also writes about the river's sandy bottom and the numerous clams and snails which can be seen. He discusses the large bed of wild rice, like wheat fields in the Minnesota River. He describes the clouds of wild ducks and the numerous muskrats building their houses out of rice straw. He writes about the prairie chickens lined up in rows along the river. He writes that the buffalo are nearly extinct in this area.


Del Wehrspann

To clean up the Minnesota River, leadership must come from the top, from our governor, our legislators and our agency heads. I plead with you to help make the restoration of the Minnesota River a "Milestone."

Giant Catfish Release in the MN River:

On May 15th the city of New Ulm celebrated is Capitol for a Day by releasing a 35-poind catfish into the Minnesota River. Whoever catches the fish will receive $1,000 from the MN Department of Natural Resources. Essay winner and local 6th grader Kyrie Sellnow and Lt. Governor Carol Molnau helped put "Big D" back into the river. Kyrie Sellnow came up with the name as part of her essay.

Rain Gardens in Nine Mile Creek Watershed

Residents looking to install rain gardens or restoring their shoreline with native plants in Nine Mile Creek Watershed can get up to $3,000 to help with water quality efforts by the local Watershed District. Other eligible projects include pervious asphalt and pavers, green roofs, and cisterns. According to Kevin Bigalke, Nine Mile Creek administrator, "We are trying to replicate how nature would have managed water." Under this incentive program, businesses are eligible for up to $25,000.

Sugar Beet Company leaves smaller carbon footprint

According to the Southern Minnesota Beet Sugar Cooperative, the company is reducing its environmental impact through a number of initiatives. Last year the company processed 2.78 million tons of sugar beets and managed to generate a net positive balance of more than 3,600 phosphorus credits.

Highlights of the environmental report:

- Encouraged growers to plant cover crops to reduce wind and water erosion, along with phosphorus discharge to the Minnesota River,
- Funded grassland project for cattle grazing and serve as buffers to trap nutrients,
- The wastewater plant treated 302.6 million gallons of water without any violations of its permit,
- Installed heat exchangers to capture more energy

Paddle the West Branch Lac qui Parle River:

On June 17th, fourteen people paddled a six-mile stretch of the West Branch Lac qui Parle River. The paddle was sponsored by the Lac qui Parle – Yellow Bank Clean Water Partnership to get people out on the water and provide an up close view of the river dynamics and surrounding landscape. There was a strong current and only one log jam to tackle. Everyone enjoyed themselves and many were surprised by the few signs of civilization. Thanks to Mary Homan for organizing the paddle and the tasty strawberry shakes at the end.

Fort Ridgely Golf Course to reopen

On June 28th, the newly redesigned, reconstructed and restored Fort Ridgely Golf Course opened to the public. Visitors found a course that takes full advantage of the scenic Minnesota River Valley along with a prairie and oak savanna restoration. Before the reconstruction phase started, an extensive archaeological and historic landscape investigation was conducted. After all the work the golf course is about 100 yards shorter and still a par 35 with the relocation of tees, greens and fairways.

Water Quality testing of Blue Earth lakes

Located in Blue Earth County and southwest of Mankato, the three chain of lakes – Crystal, Loon and Mills, have become the subject of water testing by graduate students from the Water Resources Center at Minnesota State University, Mankato. They are testing for nutrients – total phosphorus and chlorophyll a – to see what is causing the annual blue-green algae blooms. The water quality information will be used for a Total Maximum Daily Load (TMDL) study. In addition, funding for conservation practices are being offered by the Crystal Loon Mills Clean Water Partnership.

Canoeing with the Cree by Eric Sevareid

"With stunning suddenness a storm, a northwestern gale struck the settlement. The wind howled and the shutters of the inn banged and clattered. Frequent jagged streaks of lightning, followed by thunder which reverberated through the darkened forest, illuminated row upon row of ghastly white billows, far out on the lake, crashing toward the shore. At last all the tales of sudden death on Lake Winnipeg has been confirmed. The thought of being out there in the canoe made me turn pale." - page 103 – just before starting out on Lake Winnipeg.

In the summer of 1930, two young men – Eric Sevareid at age 17 and Walter Port at age 19 – paddled from Fort Snelling to the Hudson Bay. The 2,250-mile trip took them 14 weeks along the Minnesota River, Red River and eventually into the wilderness of northern Manitoba. On the trip they sent dispatches back to the Minneapolis Star, who sponsored the trip. Sevareid turned those stories into his book –"Canoeing with the Cree" – five years later.

"Coming out of the lake (Lac qui Parle), the river was very small, running in a channel not more than forty feet wide. There were high weeds on each side and everywhere around us was low, marshy swamp. There was no place to stop. The channel wound crazily, seeming to go nowhere. The reeds prevented a breeze from reaching us and, as there wasn't a sign of a tree, the sun beat down on us unmercifully. Salty perspiration ran down into our eyes and the maddening horse flies bit time and again."

"We paddled on, raging at the heat and flies, until we came to the little Pomme de Terre, or Potato River, clear as crystal, flowing into the muddy Minnesota. We peeled off our clothes and plunged in. Oh! it felt wonderful to our aching bodies."

"It took ten hours of paddling to do it, for the river was not more than twenty feet wide and it was a hard job to swing our eighteen-foot canoe around the sharp bends. Twice we had to cut our way through fallen branches. Then we made our second mistake in direction when we got on the little Whetstone Creek and dragged the canoe for an hour before Walt realized the error."

Eric Sevareid & Walter Port

Eric Sevareid died in 1992 at the age of 72 after a long distinguished career as a radio and TV correspondent. Walter Port passed away in 1994.

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