

# TIDINGS

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of the Mississippi Headwaters

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Phone: (218) 547-7263 • Fax: (218) 547-7376

E-mail: [cass.mhb@co.cass.mn.us](mailto:cass.mhb@co.cass.mn.us) • Website: [www.mississippiheadwaters.org](http://www.mississippiheadwaters.org)



## From the Director:

What a beautiful Autumn! Is there any place more beautiful than Minnesota? Our efforts at MHB are directed at keeping it that way. Let's talk about some ways this ongoing maintenance can be done in testing water quality. One constituent or parameter that is frequently tested is bacteria. This discussion will explain why we sample for this parameter and what it tells us about our water.

There are many types of bacteria that grow in water. Why test water for coliform bacteria and what is it? It is not economically practical to test for every possible disease-causing agent. Some types of bacteria "hang out" together. Therefore, a group indicator bacteria is used to measure sanitary conditions of water systems. The main concern of bacteria in drinking water is the possibility of disease, viruses and parasites. Not all bacteria are bad.

When a bacterium "hangs out" with others that may be harmful, and is easy to test, it becomes a good indicator of the presence of more harmful bacteria. Such a bacterium is fecal coliform. There are 15 known species, most do not cause disease. *E. Coli* is one species that does cause disease. *E. Coli*, is one of the species that often causes "gastroenteritis", 'Gastro' (is Latin for

stomach) 'enter' (means within) 'itis' (means inflammation of). Other species combined with fecal streptococcus may lead to infections during swimming. Most water borne diseases are mistaken for food poisoning or 24 hour flu, since the symptoms are similar.

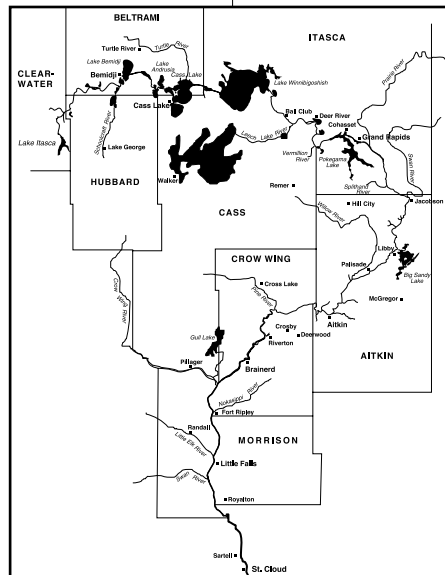
In third world countries where unsanitary sewage conditions contaminate drinking water, more serious illness occurs such as typhoid, diarrhea, dysentery, salmonellosis, hepatitis, cholera and polio. Americans are often vaccinated against many of the water borne diseases. Coliform bacteria may be killed though disinfection with a solution

of chlorine bleach. Boiling water is another method of elimination. I have found, the hard way, that some species may be resistant to boiling if it is not done long enough.

In other words, the fecal coliform group of bacteria is a good health indicator because of who they "hang out" with. Like Mom said, "It's the company you keep".

If you have your own well, have it tested for bacteria. As Americans, we are fortunate to have access to the technology that protects our health and safety. We all should have a new appreciation for a nice cool glass of water.

*In Public Service,*  
**Jane E. Van Hunnik, MS,**  
**MHB Director**



## MHB's Comprehensive Plan Nears Public Hearing Stage

Any time a regulatory document, such as the MHB Plan, is revised there is a huge responsibility to achieve the goals, be fair, and have good reasons for all changes. During this process MHB strives to meet the demanding tasks of streamlining the implementation of the MHB minimum standards; not reducing any minimum standards; providing common administration of the standards; and addressing modern technology. If you would like to receive a copy of the draft Plan, please contact the MHB Office.

Public hearings on the MHB Plan will be held in each county. Input has been incorporated into the draft Plan

from numerous meetings by the MHB, Advisory Committee, and Citizens' Taskforce, and written concerns, telephone calls and e-mails. Please attend the meetings from October to December in your respective counties, which will provide opportunity for input from you. Public Hearings will be public noticed in your county or contact your county planning and zoning office, or the MHB office for those hearings scheduled in your county. Please come help make this document the best it can be. Thank you for your time and assistance.



## MHB Participates in ACOE Low Flow Water Inspection

Commissioner Virgil Foster and Director Jane Van Hunnik accompanied the Army Corps of Engineers on ship for a Low Flow Water Inspection from St. Paul to Lock and Dam Number 2 in Hastings. The annual inspection is especially important now as MHB considers co-sponsorship of a Reconnaissance study with the ACOE and other dam tenders (specifically Ottetail, Knudsen, Federal Dam, Pokegama and MN Power) in order to promote the management of the Mississippi Headwaters dams as a unified system.

The MHB appointed retired ACOE District Manager Jim

Ruyak as an ex-officio member of the MHB Advisory committee to help guide MHB through the process. Revising dam management formulas requires an Act of Congress.

Current management formulas were put into place during the turn of the century as dams were constructed in the late 1800's and early 1900's. Current uses of the dams do not necessarily reflect original construction purposes. Complaints about water levels over the last two years indicate a possible need to consider revisions, based on current facts and current uses.

## River Rally and Clean-Up a Success

Little Falls, August 22, 2000: On Saturday morning, August 19th, Great River/ Great People sponsored a river rally and clean-up along the Mississippi River.

The morning began along the Mississippi at the Royalton Sportsmen's Club with a citizen meeting focusing on the Mississippi River - how it has helped write local history and a look at the river as a biological resource. Speakers included local artist Muriel Poehler, Jan Warner, Morrison County Historical Society, Beth Nodland, Institute for Minnesota Archaeology, Garth Fuller, The Nature Conservancy, and Jim Lillienthal, DNR Fisheries.

Following the meeting, a river clean-up was held at the Blanchard Dam site with a team of 23 participants - aged three to 79 - collecting more than 500 lbs. of garbage and debris from shoreline areas. Observing the work, Dave Hietala, Coordinator of GR/GP, shared, "It's easy to get bummed-out when you see all the trash; but open your eyes further



Three year-old Mark Brezinka helps Beth Nodland, Institute for MN Archaeology, pick up trash.

and see these people, young and not so young, carrying trash bags - each one showing that they care, each one working to make a difference. It's encouraging, very encouraging."

Great River/ Great People is a collaboration of individuals and organizations dedicated to interpretation, preservation, and enhancement of the Mississippi River. For more information on Great River/ Great People, contact Dave Hietala at 320-632-5160 or via email to [greatriver@juno.com](mailto:greatriver@juno.com).

## State Science Fair Award Winner Addresses the MHB



Kelly Schmiedt of Fort Ripley, MN received the MHB State Science Award at the MHB meeting held in Morrison County August 18, 2000. Ms. Schmiedt's project was entitled "Water Quality Assessment of an Agriculturally Affected Creek Compared to a Least Impacted Creek." Ms. Schmiedt is a Senior at Little Falls Community High School.

The project was designed to compare data of a least impacted creek acting as a control (Broken Bow) to that of an agriculturally influenced creek (Pike Creek) and distinguish differences of water quality. Tests performed include pH, conductivity, dissolved oxygen, nitrate and ammonia nitrogen, phosphorus and fecal coliform bacteria. Macroinvertebrates were collected and counted. Bioassays were performed to determine if toxic organics or heavy metals were present.

The two creeks are nearly equidistant and both empty into the Mississippi River. Pike Creek has six sites labeled

source to mouth, PC1-PC6. Broken Bow has five sites labeled BB0-BB4. Between 6/24 to 10/17 of 1999, five chemical, two biological, and one bioassay samples were taken at all sites. River Watch protocol (EPA approved) procedures were used.

Pike Creek showed significant water quality impairment based on the bioassay testing using *Lactuca sativa* seed root growth while Broken Bow indicated none, possibly from toxic organics. Phosphorus levels exceeded ecoregion normals 80% of Pike Creek samples compared with 16% at Broken Bow. Macroinvertebrate analysis was not sufficient alone to test water quality. The wetland complex on Pike Creek between PC4-PC5 exhibited filtering effects dropping conductivity and fecal coliform counts significantly. 60% of Pike Creek samples compared with 8% of Broken Bow exceeded total body contact standards for fecal coliform bacteria. Pike Creek has the potential to adversely affect the Mississippi and is a risk to human health while Broken Bow does not. Without agricultural impact, Pike Creek's water quality could be similar to Broken Bow Creek.

## MHB Recognizes Oral History Project Participants

On September 5, 2000 in Walker, the MHB hosted a luncheon thanking the narrators and interviewers of the Oral History Project. Completed transcript packets were given out to several of the narrators. Bob Bilden, of the Pioneer Farm from near Itasca State Park, provided entertaining stories and songs written about the Mississippi River. The Oral History Project is sponsored by the Minnesota Historical Society, Minnesota Power, the MHB, and supported by various county historical societies.

The following is an excerpt from an oral history narration provided by Ronald Miller, born in 1937, who grew up in the Federal Dam and Bena area. The interview was conducted by Cecelia McKeig of Federal Dam, MN on May 2, 1999. Mr. Miller discusses the wash out of the dam in 1957.



*"How I happened to be working for Lakehead was that my dad had equipment and when Lakehead got the contract for the dam, they had to start. I think it was part of the contract, work within so many days. Lakehead actually asked my dad to furnish some bodies to get started down there. I don't recollect just who, Monte McKeig,*

*myself, maybe Billy Monette and possibly Ray Miller..."*

*"Like I say, we had taken the stop-logs out of a couple of locks and toward evening, I'd say six or seven o'clock that evening, somebody come up and stopped and said that there was water washing under the dam. So the superintendent for Lakehead was Arnold Boyette and he had two foremen, Gus, and Morey Larson. They hollered at me and I think Monte was there. We got a hold of Monte and we all went down and we were told to get them stop-logs back in because there was water going underneath. So we were trying to get stop-logs in and there's so much pressure, the water was boiling pretty good. I can still remember them big concrete piers moved. I was standing on it, just bought a new, leather coat and was so proud of it. I took it off because it was warm and laid it down. Then, trying to get these stop-logs in and it moved. Gus the foreman was standing up above me on the walkway and I looked at Gus and I said, "Gus, this dam moved!" He was kind of a comical fellow and he laughed, "Haw, haw, what's the matter Miller, you scared?" I said, "No, it moved. I know it did." So we went back to trying to get them [stop-logs] in and finally everybody decided the dam was moving so we crawled up out of there and got up on top and it was just like one of these huge piers floated right out from under the driveway on the dam. I think it probably ended up about twenty feet downstream and then of course, it really let loose and everything started going..."*

*"When things started happening, he [Boyette] decided there was big trouble, he hollered at Billy Monette who was standing over by his pickup, he hollered at Billy to bring his pickup across and get it to the south side. Billy jumped in that pickup, started it up, tromped on it and it died, thank goodness.*

*Just about the time it died, that dam went out and the driveway collapsed. So if it wouldn't have died, he would have been probably right in the middle of the washout. After that, it was panic, I guess, I don't remember what-all, I know we didn't get home. We had that pickup but there must have been more of us because they sent vehicles around for us. They probably had to go to Boy River, Remer, back up on Highway 6 and cut across to Deer River, Willow Beach, I believe, and then back down. It was about forty miles they had to go around to get us back home. I know we didn't get home until two or three o'clock in the morning that morning... Then after that, well, the next morning, it was amazing to look out where there used to be a little winding river through the big meadow, it was one great big lake..."*



*"There was a lot of concern [about the old railroad bridge] because it definitely was another bottle-neck in the river with the water that was going through the dam. There was so much construction material and probably stuff off the meadow itself that ended up getting washed down and jammed into the piling on that bridge. But it held, didn't weaken it even, apparently. As far as I know, they never had to ever*



Photos provided by Cecelia McKeig.

*cancel any trains. That was where we got a lot of the timbers back was off from that jam at the bridge. I even found my leather jacket in that log jam... Never wore it again, I don't think. It was pretty well demolished and that's where it ended up at."*

MHB is looking for more storytellers. If you have a story to tell, or would like more information about the Oral History Project, contact Patricia Oliver at 218-963-4595 or the Mississippi Headwaters Board at 218-547-7248.

### ROSSMAN WATER BOOKS ON-LINE

People interested in weather and water levels in the Mississippi Headwaters region now have a new source of information. The new website is open to public use at < [www.minn-north.org](http://www.minn-north.org) .

*We would like to hear your comments!*

## MHB Guide Book Available

The Mississippi Headwaters Guide Book surveys the natural, cultural, scenic, scientific and recreational values of the Mississippi's first 400 miles in northern Minnesota. The Guide Book describes the natural topography, vegetation, water quality and animal life associated with the river. The Guide Book also describes how people have lived with the river, beginning with the nomadic people who visited here 10,000 years ago, and the various Native cultures who first populated the headwaters. The Guide Book concludes with how people use the river now and describes current threats to the river's health. Published in 1995, the Guide Book introduces people to the river by suggesting



excursions to various forests, parks, and nature areas, as well as providing sources to assist with trip planning.

Like the river it describes, the Guide Book is beautiful. It tells the story of the river's natural and human history using original drawings, photographs and color maps of the river and its shorelands. The Guide Book was researched, written and produced by the Mississippi Headwaters Board, which is mandated by the State of Minnesota to protect the river. Copies

are available from the MHB Office for \$10 plus tax and shipping. Proceeds from Guide Book sales benefit the River Watch Project.

**The Mississippi Headwaters Board (MHB) is a joint powers board of Clearwater, Hubbard, Beltrami, Cass, Itasca, Aitkin, Crow Wing and Morrison counties, organized in 1980 to protect and preserve the natural, cultural, historical, scientific and recreational values of the Mississippi's first 400 miles. The Board protects the river by regulating land use on its shorelands; by monitoring water quality and taking actions to protect the health of the river, and by educating the river's users and neighbors on how to balance human uses with the river's ecology.**

**R. Otterstad**, Chairman, Beltrami • **V. Foster**, Vice Chairman, Cass • **K. Solberg**, Secretary-Treasurer, Clearwater • **J. E. Van Hunnik**, Director  
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Mississippi Headwaters Board  
 Cass County Courthouse  
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