

# Minnesota River Update:

July 15, 2005

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## **COMMENT PERIOD OPEN ON DRAFT MINNESOTA RIVER GENERAL**

**PHOSPHORUS PERMIT:** The MPCA is accepting public comments through July 28, 2005 on a draft general permit that will regulate phosphorus in discharges from wastewater treatment facilities in the Minnesota River Basin.

The permit is an outcome of the Lower Minnesota River Dissolved Oxygen TMDL. The initial goal of this permit is a combined 35 percent reduction in phosphorus discharges from existing levels by 2010.

Phosphorus is an essential nutrient for living things, but too much can cause water pollution by promoting excessive algae growth. When large amounts of algae are consumed by bacteria, it results in reduced levels of dissolved oxygen available for fish and other aquatic life. Algae also decrease water clarity.

For the past year the MPCA has been meeting with representatives of the 40 largest wastewater treatment facilities in the basin as well as environmental groups and others. These larger communities will be required to meet a limit on the total amount of phosphorus discharged from their facilities each year or engage in pollutant trading to meet that limit. The permit will also include about 130 smaller wastewater treatment facilities; however, these facilities will not be subject to a phosphorus limit under this permit unless they expand.

One benefit of a basin-wide permit for phosphorus covering all communities is that it will allow them to work together to solve the problem and use innovative tools such as pollutant trading. A community with excess wastewater treatment capacity may "sell" some to another community that needs to reduce the amount of phosphorus in its discharge.

The phosphorus permit is a major tool in the Lower Minnesota River TMDL project to increase the level of dissolved oxygen during low flow periods in the Minnesota River from Shakopee to its confluence with the Mississippi River. When river flows are low, wastewater treatment facility discharges are a major source of phosphorus.

Other sources of phosphorus include stormwater runoff from cities, directly discharged sewage, and erosion from farmland and construction sites. These will be addressed in an implementation plan, which will be completed later this year (see article below).

Public information meetings on the draft permit will be held from 6 p.m. to 9 p.m. July 20 at the Granite Falls Kilowatt Center, and July 21 at the Best Western Inn near Highway 169 in North Mankato.

Comments on the draft general permit should be submitted in writing to Steve Sommer, MPCA Municipal Division, 520 Lafayette Road N., St. Paul, MN, 55155-4194, or e-mailed to [steven.sommer@pca.state.mn.us](mailto:steven.sommer@pca.state.mn.us), by 4:30 p.m., Thursday, July 28, 2005. Copies of the draft general permit are available on the Web at [www.pca.state.mn.us/permits](http://www.pca.state.mn.us/permits) (click on draft permits and scroll to June 27, 2005). General information on the MPCA phosphorus strategy is available on the Web at [www.pca.state.mn.us/water/phosphorus.html](http://www.pca.state.mn.us/water/phosphorus.html).

### **IMPLEMENTING THE LOWER MINNESOTA RIVER DISSOLVED OXYGEN TMDL:**

The Lower Minnesota River Dissolved Oxygen TMDL Report was approved by the EPA in September, 2004. The Report identified the allowable levels of phosphorus that will result in the attainment of the dissolved oxygen standard in the lower 22 miles of the Minnesota River during low flow conditions. The low dissolved oxygen problem occurs during low flow conditions in this stretch of the Minnesota River.

The four main sources of phosphorus contributing to the impaired reach include 1) continuously discharging point sources; 2) urban stormwater; 3) direct discharges of sewage from non-compliant individual sewage treatment systems (ISTS) and unsewered communities; and 4) runoff from agricultural cropland.

An implementation plan will be drafted for the TMDL. It will include the following components:

#### Point sources

Reducing phosphorus from point sources involves a general permit for phosphorus as described above.

#### Stormwater

Permitted entities such as communities, industry, or construction sites will submit Stormwater Pollution Prevention Plans (SWPPP) as part of their permit requirements. Minnesota River Basin permittees will add measures to their SWPPPs to reduce phosphorus. Reductions from nonpermitted communities will rely on education and voluntary measures.

#### Direct discharges of sewage

Directly discharging systems are those that discharge sewage at the surface or via a pipe to a ditch or stream. Unsewered communities are also included. Increasing compliance in this sector will involve enhancing assistance for small unsewered communities, targeting loan funding for homeowners, and an inventory of directly discharging systems conducted by counties. Priority may be given to counties not involved in a fecal coliform bacteria TMDL project and/or counties that do not have point of sale inspection requirements. Counties involved in fecal coliform bacteria TMDL projects will be developing focused implementation plans at the local level, which will target directly discharging systems on the local level.

#### Agriculture

Since this particular TMDL implementation plan focuses on low flow conditions, agricultural practices exclusively targeting phosphorus reductions will have a limited impact because runoff is minimal. The TMDL Report did include agricultural practices

as a way to reduce runoff during higher flow times, therefore increasing the amount of groundwater recharge during dry periods. This temporarily stored groundwater seeps back into the river and increases the flow during low flow periods. Crop residue and protection of surface tile intakes are two practices that are targeted. In cases where these practices are not options, equivalent practices should be used.

#### Project evaluation

A key component of the implementation plan will be to track practices that are put in place as a result of the TMDL and to rerun the HSPF model near 2010 (or when the next low flow period occurs) when some of the reductions are in place. This allows the MPCA to make adjustments to the TMDL and implementation plan goals, if necessary.

**STATE OF THE MINNESOTA RIVER REPORT ON THE WEB:** The 2003 State of the Minnesota River Report is completed and available at <http://mrfdc.mnsu.edu>. The executive summaries will be ready soon. This is the fourth annual report and includes data from 32 surface water quality monitoring stations on 28 tributary streams.

#### Abstract of the Report:

“Water-quality and streamflow data collected in the Minnesota River Basin during 2000 - 03 were examined and evaluated to determine the condition of 28 tributary streams and the Minnesota River mainstem with respect to concentrations, loads and yields of total suspended solids, total phosphorus, orthophosphorus, nitrate-nitrogen, pesticides, and bacteria. The data show widely varying water-quality conditions in most streams during a relatively short four-year monitoring period, underscoring the need for longer-term data gathering to gain an accurate perspective of water quality across a broad spectrum of hydrologic conditions. Results show that watershed yields of water-quality constituents follow a general pattern of increasing yield, often accompanied by increasing flow-weighted mean concentrations, from west-to-east across the Minnesota River Basin. The data indicate regional differences in the magnitude of constituent load response to water runoff. The difference in response is related to watershed soils, geology, topography, and stream morphology, but land use, cropping practices, drainage practices, and conservation practices also may be affecting the load response. Concentrations of total suspended solids, total phosphorus, orthophosphorus and nitrate-nitrogen in several of the monitored streams, despite reductions during 2003, frequently are at problematic levels, exceeding thresholds associated with reasonable expectations for water quality in their respective ecoregions. Affected streams range in size from minor tributaries to the Minnesota River mainstem. Impaired conditions were documented during widely varying hydrologic conditions ranging from near drought to flood. The data gathering, using consistent and technically-sound methodology at all sites across the Minnesota River Basin, serves to document present stream condition and provides a basis for directing resources to impaired streams. Such data, collected longer term, will form a solid body of evidence that accurately portrays stream water quality over time. These data will enhance the impaired waters listing process by providing an improved perspective of stream water quality during normal, above normal, and below normal runoff periods. During the four-year period, the monitoring data have served to identify impaired streams and have provided indications of source areas, but questions remain about specific contaminant sources, source mobilization, and transport mechanisms. The more complex mechanisms may require in-depth focused

research studies beyond the scope of the present monitoring program and suggestions for research projects are presented in this report.”

### **MINNESOTA RIVER WATERSHED ALLIANCE TO MEET JULY 27 IN HUTCHINSON:**

The meeting will be at the Victorian Inn from 6 to 9 p.m. This will be the third meeting of the Alliance. The first meeting in February determined the need for such an alliance to enable diverse watershed groups to speak as one voice on issues facing the river’s water quality, biological integrity and scenic beauty. More than 90 people attended and all agreed that the time to form such an alliance had arrived.

The second meeting in April attempted to narrow down the list of potential issues that the Minnesota River Watershed Alliance (MRWA) could focus on in its first year. Five issue caucuses were formed to explore how and if the MRWA could work together. The five areas of potential cooperation were: A Public Relations and Communications Strategy for the River; Agricultural Drainage Reform; Wetland Restoration; Federal Farm Policy; and Development/Land Use Issues facing the River.

At the end of the second meeting, the 70 participants were asked to go home and let the issues percolate and return for a third meeting to make a decision on what the first focus issue should be. In the meantime, it was suggested that the MRWA could cooperate in helping to promote the “Hudson Bay Expedition” canoe trip up the Minnesota River in May (<http://www.hudsonbayexpedition.com>) and in the “Meander the Minnesota with Minge” Bike Tour scheduled for Labor Day weekend ([www.parksandtrails.org](http://www.parksandtrails.org)).

It was also suggested that group members keep in touch by using the bulletin board established by the Minnesota River Data Center. Anyone can post a message to this site by visiting: <http://mail.mnsu.edu/mailman/listinfo/mrwa>

While this bulletin board has yet to be fully utilized by the MRWA, it represents a valuable tool for communicating across the watershed. It is hoped that more MRWA member organizations will sign on to the service which is free and protects e-mails addresses from being stolen by others.

On May 25th, members of the MRWA steering committee met with Shannon Fisher, the new director of the Water Resources Center and the Minnesota River Board based out of Mankato State University.

In the process of this discussion, we also talked with Shannon Fisher about how the new MRWA could best serve the aims and purposes of the Minnesota River Board. It was suggested that the MRWA could help communicate and disseminate the resolutions made by the Minnesota River Board (MRB). For instance, the MRB recently passed a resolution calling for all counties in the Minnesota River Watershed to enact updated and uniform ordinances governing septic systems. The MRB also is working on resolutions concerning agricultural drainage and buffer strips along ditches. The MRWA could act as a vehicle to more widely publicize these resolutions and work at the county level to get them enacted.

**GRANTS MANAGEMENT TRAINING OFFERED:** The comprehensive grant training program Grants Management: Planning, Implementing, Monitoring, and Evaluating Grant-Funded Programs will be held in Onamia, MN at Grand Casino, Mille Lacs on September 12-15, 2005. This internationally acclaimed advanced grants management workshop is presented by COMMUNITY SYSTEMS of Bozeman, Montana, and conducted by Dr. Barbara Bader and Mr. Steven Carr. This is sponsored by the Minnesota Association of Resource Conservation & Development and co-sponsored by USDA Natural Resources Conservation Service.

This advanced workshop helps grant recipients build their grant management capacity, promoting a solid track record of successful grant implementation. Each workshop participant receives COMMUNITY SYSTEMS detailed 489+ page grants management training/resource manual. The workshop focuses on avoiding common grant management problems encountered with government, foundation, corporate, and other grants while building an outstanding grants track record.

For further information on this limited enrollment grants management training program or to register for the comprehensive workshop contact Three Rivers RC&D in Mankato, MN at 507-345-7418 ext. 5. This outstanding grants management training program is expected to fill early, and the workshop registration deadline is August 12, 2005.

**SEEING THE RESOURCE HELPS ONE UNDERSTAND EROSION ISSUES:** Fresh sediment a foot deep with miniature rills pointing down toward the river, roots exposed. Trees, brimming with green leaves, feet from the water, gingerly hanging onto the Blue Earth River's banks. From the front of a canoe, I watched the banks of the Blue Earth and Le Sueur Rivers behind two other canoes and in front of two kayaks. I periodically paddled, but didn't have to. We only hit bottom a few times; otherwise, the river's current moved us along. The trip was on June 9 and the rivers were up a little more than usual.

Transparency tube levels were 14 cm where we started on the Le Sueur, 11 cm in the mouth of the Cobb River, and 8 cm in the mouth of the Maple River. MPCA hydrologist Pat Baskfield explained that at this time of year after a good storm, transparency tube levels can get much lower (around 1 or 2 cm).

We canoed about 3 miles of the Blue Earth near Amboy and 8 miles of the Le Sueur east of Rapidan. Steep vertical stream banks some 100 ft high were striking in places on the lower parts of the Le Sueur. Overall the streambanks appeared stable and well vegetated. On the upper Blue Earth the streambanks were much less dramatic but appeared less stable with vegetation sparse in places and abundant signs of recent erosion. We were canoeing to get a better feel for these two rivers, both of which monitoring data has indicated are significant contributors of sediment and nutrients to the Minnesota River. - The editor

**QUOTE OF THE WEEK:** "For many of us, water simply flows from a faucet, and we think little about it beyond this point of contact. We have lost a sense of respect for the wild river, for the complex workings of a wetland, for the intricate web of life that water supports. - Sandra Postel, Last Oasis: Facing Water Scarcity

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