

## **Minnesota River Update:**

**December 13, 2005**

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*Past issues of the Minnesota River Weekly Update are available on the Internet at <http://www.pca.state.mn.us/water/basins/mnriver/>*

**UPDATE ON THE BLUE EARTH RIVER BASIN BACTERIA TMDL:** MSU's Scott Matteson and MPCA's Lee Ganske recently sent an update on the Blue Earth River Fecal Coliform Bacteria TMDL. The project targets 16 impaired stream segments in the Blue Earth, Watonwan, and Le Sueur River Watersheds. Review of over 1,250 water quality samples from 31 monitoring locations revealed that 100 percent of the streams with adequate monitoring data qualify to be listed as impaired for fecal coliform bacteria. Upon completion of the study in summer, 2006, the TMDL report will be drafted and available for public review. The major bacteria sources are non-compliant septic systems, unsewered communities, urban runoff, field applied manure, feedlots without runoff controls, over-grazed pastures near streams, wildlife, and bypasses or violations from wastewater treatment plants. Work is already underway to reduce bacteria from many of these sources. Public meetings have been held to update watershed residents on the project and will continue once the TMDL report is drafted.

**STUDY SHOWS POSSIBLE IMPACT OF GLOBAL WARMING ON WETLANDS IN PRAIRIE POTHOLE REGION:** An article in the Star Tribune on November 27, 2005 describes a study that shows how global warming may impact wetlands and waterfowl habitat and more reasons for wetland restoration.

North America's premier duck breeding grounds will be much drier and in many places will disappear, according to a study on how climate change could affect the Upper Midwest in the next 50 to 100 years. Carter Johnson, a professor of ecology at South Dakota State University and co-author of the research, said that the number of ducks could plummet by 50 percent or more as early as 2050 if global warming dries up the wetlands where they nest.

The area, known as the prairie pothole region, contains an estimated 5 million small ponds spread across more than 300,000 square miles of the Dakotas, western Minnesota and Iowa, northeastern Montana and three Canadian provinces. It is notorious for episodic wet and dry spells, but is large enough for waterfowl to adapt and migrate past localized areas of drought to find other ponds in the region with enough water and cover.

That would end if climate change increases average temperatures across the entire prairie pothole region, Johnson said. Most of the area would become too dry for ducks and other birds, he said. Only the fringes of the region -- in western Minnesota and northwestern Iowa -- might still have wetlands, he said. Johnson and a team of researchers from Minnesota and Montana reached these dire conclusions after studying 95 years of climate data and using hydrologic models to simulate how the Northern Great Plains would change during this century. Their report, published in the journal *BioScience*, offers detailed predictions on how global warming might affect the prairie potholes, which produce between 50 to 80 percent of the continent's ducks.

### **Region is a 'duck factory'**

The prairie pothole region has been described as a "duck factory" and is considered to be one of the most productive habitats for waterfowl in the world. The reason, according to study co-author Glenn Guntenspergen, is that it contains different types of wetlands that birds need at different times. Temporary wetlands that hold water only in early spring are critical for ducks as they migrate north because they harbor insects and other food while deeper wetlands remain frozen, he said. After the ducks pair, mate and nest, he said, they and their ducklings need deeper wetlands for food and protection in late spring and summer.

Guntenspergen, a research ecologist with the U.S. Geological Survey in Duluth, said the team used conservative projections of temperature increases in the study, and estimated what would happen with an average temperature increase of 5.4 degrees Fahrenheit during the next 100 years. The area would still have occasional wet years, he said, but they would be much less frequent. The net effect would be lower water levels, longer dry periods and no water for years in many shallow wetlands. The effect on birds would be dramatic, and the research paper cited mallards as an example. Whereas the number of mallards during the past century has ranged from 2 million to 7 million birds a year during droughts and wet periods, it said, the outlook for the coming decades is that mallard populations will drop below historical lows and remain there.

### **The next best habitat**

Guntenspergen said that if the most productive waterfowl breeding areas in the Dakotas become marginal, the next best habitat for birds will be on the eastern and northern fringes of the pothole region, including western Minnesota and northwestern Iowa. In those areas, most wetlands have been drained and would need to be restored, he said. For that reason, federal conservation managers may need to "hedge their bets" and begin spending more money on wetlands restoration in Minnesota and Iowa, he added. The study's predictions left Dave Zentner dumbfounded. He is a Duluth conservationist who coordinated a rally for ducks, wetlands and clean water in April that drew an estimated 4,000 people to the state Capitol. The predicted wetland and waterfowl losses should concern not only hunters but everyone who cares about trumpeter swans, gulls, terns, bitterns, night herons and other wildlife that depends on wetlands, he said. "I would hope that duck hunters would take this seriously and realize that this is not far-fetched theory," he said. "This is a real threat and the country needs to develop policies for it."

Many conservation groups have worked to protect and restore wetlands. That work is continuing, said Bill Henke, president of the Minnesota division of the Izaak Walton League. Now, the threat of global warming means that conservationists must take on that issue as well.

Article by Tom Meersman

<http://www.startribune.com/stories/531/5749623.html>

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**NEW WATERSHED FUNDING WEB SITE NOW ONLINE:** According to the EPA's December, 2005 Watershed News newsletter, the Agency recently launched a

Watershed Funding Web site. The pages contain links to tools, databases, and resources about grants, funding and fundraising. The Web site is designed to help nonprofit watershed organizations, state and local governments, and funders (e.g., foundations) more easily find information so that they can effectively obtain and invest resources to improve watershed health. EPA's Sustainable Finance Team within the Office of Wetlands, Oceans and Watersheds is responsible for the site. Please visit the Watershed Funding homepage at <http://www.epa.gov/owow/funding.html>.

### **GREATER BLUE EARTH RIVER WATERSHED INITIATIVE SEEKS**

**COORDINATOR:** Three Rivers Resource Conservation and Development (RC&D) Council, a 501(c)3 located in Mankato, seeks a person to work full-time, temporary (based on project funding) to coordinate and complete water quality projects in the Greater Blue Earth River Basin. Duties include coordinating activities to work with project partners and landowners on wetland restorations, nutrient management demonstrations, cost share, riparian buffers, water quality education, conservation practice cost share, conservation programs promotion, water quality monitoring, outreach, and other water quality projects.

Desired Qualifications include a B.S. degree in agriculture, natural resources, soils, water quality, environmental science or similar degree AND 2 years work experience in resource conservation, agriculture and/or related field OR 2 years college and 4 years work experience in resource conservation, agriculture and/or related field OR 6 years work experience in resource conservation, agriculture and/or related field. Equivalent education and experience also accepted.

A driver's license is required. Pay based education and experience. Please contact Three Rivers RC&D at 507-345-7418 x5 or stop by 1160 Victory Drive #4, Mankato, MN 56001 for required application materials. Applications must be **received** by Three Rivers RC&D by 4:00 PM Wednesday, January 4, 2006.

**MINNESOTA RIVER WATERSHED ALLIANCE MEETS JANUARY 24:** The next meeting of the Minnesota River Watershed Alliance will be on Tuesday, January 24th at 6:00 p.m. at the Hutchinson Events Center. It is located on the south end of Hutchinson, off State Highway 15.

**QUOTE OF THE WEEK:** "The human race is divided into two classes--those who go ahead and do something, and those who sit still and inquire, "Why wasn't it done the other way?" - Oliver Wendell Holmes, Jr.

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