



Minnesota  
Pollution  
Control  
Agency

# Revised Regional TMDL Evaluation of Fecal Coliform Bacteria Impairments in the Lower Mississippi River Basin

Regional  
Division

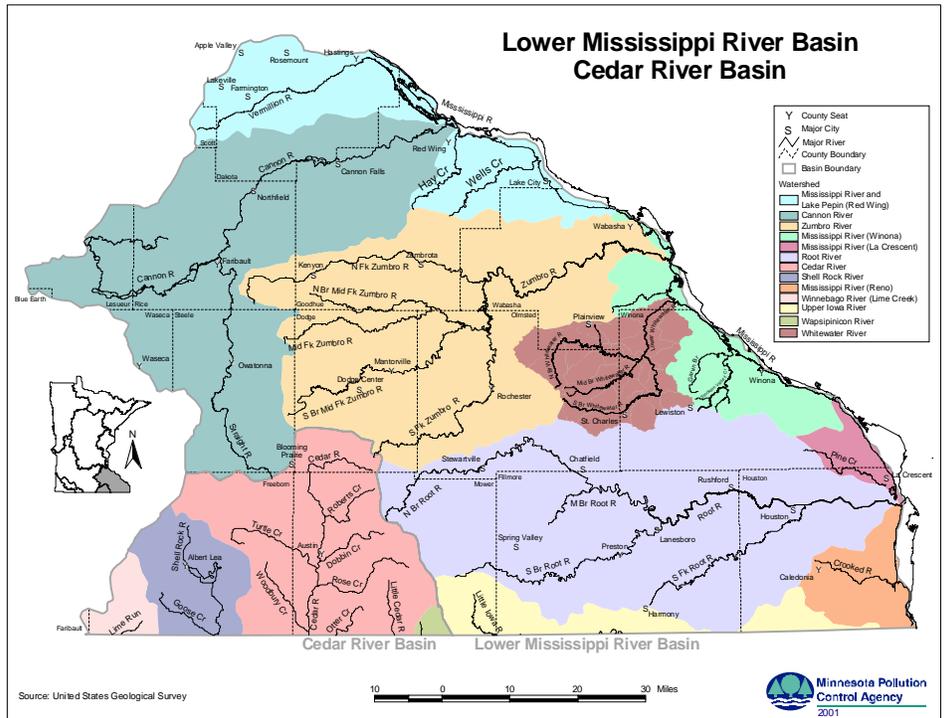
Impaired  
Waters  
Program

The federal Clean Water Act and the United States Environmental Protection Agency's Water Quality Planning and Management Regulations require states to develop Total Maximum Daily Loads (TMDLs) for water bodies that do not meet water quality standards.

The TMDL process establishes the allowable level of pollutants for a water body based on the relationship between pollutant sources and water conditions. Development of a TMDL Report provides a basis for determining the pollutant reductions necessary from point and nonpoint sources to restore and maintain the quality of water resources.

Thirty-nine stream reaches in the Lower Mississippi and Cedar River Basins are impaired for swimming use. Fecal coliform levels in these reaches violate Minnesota water quality standards. The purpose of this 2005 TMDL Report is to revise a 2002 TMDL developed for fecal coliform impairments in the same geographic area.

Water Quality/Impaired Waters #9.02a, August 2005



## 2002 Report

In 2002, the MPCA submitted a report titled, *Regional Total Maximum Daily Load Evaluation of Fecal Coliform Bacteria Impairments in the Lower Mississippi River Basin in Minnesota* to the U.S. Environmental Protection Agency (EPA). The report satisfied the requirements of the federal Clean Water Act for 20 stream reaches in the Lower Mississippi and Cedar River basins. The original report is available for review on the MPCA web site at <http://www.pca.state.mn.us/water/tmdl/index.htm#finaltmdl>. The report was approved by the EPA in November 2002, a decision that was later challenged by the Minnesota Center for Environmental Advocacy (MCEA).

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## Results of Legal Challenge

In a June 2005 ruling, the United States District Court for Minnesota remanded the TMDL report back to the EPA for revisions. The complete court ruling is available on the MPCA Web site at

<http://www.pca.state.mn.us/water/tmdl/index.html#finaltmdl>. In short, the court ruling states that the revised TMDL must

- Be established at a level necessary to implement the applicable water quality standards for each reach impaired with fecal coliform contamination
- Contain a margin of safety that accounts for lack of knowledge concerning the relationship between effluent limitations and water quality
- Properly account for straight pipe septic systems in the wasteload allocation of the TMDL

**Wasteload allocation:** all point sources or permitted facilities in the TMDL affected area

**Load allocation:** all nonpoint sources, including those considered part of the natural background, in the TMDL affected area

## Additional Revisions

Prior to the court ruling, the MPCA had begun revisions in two other areas of the TMDL. First, a number of reaches have been added to the impaired waters list since the original TMDL was submitted for approval. As such, the revised TMDL includes 39 reaches as opposed to the 20 contained in the original report. In addition, based on new EPA guidelines, municipal separate storm sewer systems and confined animal feedlot operations are now included in the wasteload allocation, rather than the load allocation.

## A Different Approach

Based on the requirements of the court order, the approach to the revised TMDL is quite different from that of the original. The original TMDL report set source-specific fecal coliform reduction goals for the entire basin. The revised report establishes monthly fecal coliform loading capacities and allocations for each individual impaired reach. Based on these loading capacities and allocations, reduction goals will be reviewed as part of an implementation plan update process.

## Implementation

Despite the legal challenge, the MPCA proceeded to develop and put in place an implementation plan for the TMDL. Implementation plans detail the source reductions and needed activities for meeting the pollutant load allocations set in the TMDL. A wide range of efforts to reduce fecal coliform bacteria in the rivers and streams of the basin are underway. A few of the specific efforts include:

- Reduction of runoff from smaller, open lot livestock feedlots through increased technical, educational, and financial support
- Assistance to beef and dairy producers to accelerate the use of rotational grazing
- A doubling in the rate at which inadequate septic systems and small unsewered communities are being upgraded

Upon approval of the revised TMDL report, a public process for reviewing and updating the existing implementation plan will begin.

## For More Information

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On the Web, visit <http://www.pca.state.mn.us/water/tmdl>

The draft TMDL report is located on the Web at <http://www.pca.state.mn.us/water/tmdl/index.html#drafttmdl>