



Minnesota
Pollution
Control
Agency

Upper Mississippi Clearwater River, County Ditch 44 to Lake Betsy Dissolved Oxygen Total Maximum Daily Load Project

Clearwater River TMDL wq-iw8-29a • July 2010

Impaired waters are those that do not meet state water quality standards as set forth in Minn. R. ch. 7050. Common impairments are for dissolved oxygen, nutrients, turbidity, bacteria, or metals. Impaired water bodies fail to meet criteria required to support aquatic life, or allow the designated use of a water body, such as swimming or fishing.

The Federal Clean Water Act requires the Minnesota Pollution Control Agency (MPCA) to identify impaired water bodies and develop a total maximum daily load (TMDL) for each parameter for which the water body does not meet standards. The TMDL is the total amount of a pollutant a water body can take on while meeting the established water quality standard(s).

TMDL progress in the Clearwater River Watershed

TMDL studies were already conducted and approved by the U.S. Environmental Protection Agency for one reach of the Clearwater River, and for six lakes in the upper watershed. These listings include:

- Clearwater River between County Ditch (CD) 44 and Lake Betsy (bacteria)
- Lake Louisa (nutrients)
- Lake Betsy (nutrients)
- Clear Lake (nutrients)
- Lake Marie (nutrients)
- Scott Lake (nutrients)
- Union Lake (nutrients)



The CRWD has also completed a draft TMDL study for five additional nutrient-impaired lakes in the lower watershed, including:

- Albion
- Henshaw
- Augusta
- Caroline
- Swartout

Results of this five-lake study indicate average nutrient load reductions of 25-95% are necessary to restore the lakes to state standards. This draft TMDL study is open for public comment in June 2010.

The Clearwater River, CD 44 to Lake Betsy was listed for Dissolved Oxygen (DO) in 2004 when monitoring data indicated that DO concentrations frequently fell below the state standard of 5 milligrams per liter (mg/L). Concentrations below 5 mg/L can have a negative impact on aquatic life such as fish. The DO TMDL study for CD 44 to Lake Betsy will be open for comment in July of 2010.

The CRWD has developed a watershed-wide implementation plan based on priorities set forth in the TMDL studies and local stakeholder input. A corresponding monitoring plan designed to gauge implementation effectiveness has been prepared as well. The Clearwater River Watershed District (CRWD) has received its first implementation grant from the Board of Water and Soil Resources (BWSR) to begin restoration activities in the upper watershed.

The findings of the TMDL studies were presented at several public meetings held throughout the watershed. Project documents, including the implementation plan, are available at the Clearwater River Watershed District Web site, www.crwd.org, and on the MPCA's Web site at <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesota-s-impaired-waters-and-tmdls/tmdl-projects/upper-mississippi-river-basin-tmdl-projects/approved-tmdl-clearwater-river-watershed-low-dissolved-oxygen-fecal-coliform-and-lake-nutrients.html>.

Implementation of the recommendations will depend on securing funding, and approval of the TMDL reports by the MPCA and the U.S. Environmental Protection Agency.

What you can do

Many opportunities exist for the public to participate in helping protect the waters in the Clearwater River watershed.

The following are examples of implementation strategies to help reduce pollution.

- Participate in the TMDL Process – residents are encouraged to learn about the TMDL process and attend public meetings sponsored by the CRWD to present study results. The meetings will be an opportunity to learn about urban stormwater management, septic system upgrades, buffer installations, and other practices that could be implemented to reach TMDL goals.
- Plant a shoreline buffer or a rain garden – those who live along a lake or river can take advantage of financial incentives to plant buffers or rain gardens to prevent sediment, nutrients, or bacteria from entering the water. Visit www.crwd.org to find out more.
- Plant farm buffers – farmers who have rivers or lakes near their properties can qualify for incentives from the Watershed District to join federal conservation programs or install buffers. Contact the Watershed District at 320-274-3935 for more information.

For more information

For more information about this study and how it relates to MPCA's Impaired Waters programs, contact the MPCA at 651-296-6300 or 800-657-3864 and ask for the Upper Mississippi Basin TMDL staff or the Brainerd Public Information Officer.

