



Minnesota
Pollution
Control
Agency

Clearwater River Total Maximum Daily Load (TMDL) Project

Clearwater River TMDL wq-iw8-10a • July 2009

Impaired waters are those that do not meet state water quality standards as set forth in Minnesota Statute Chapter 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).

A TMDL study is typically developed in four phases:

- Phase 1 - existing data is reviewed, data gaps are identified, and plans are developed to collect and analyze the additional data needed
- Phase 2 – that additional data is collected and evaluated
- Phase 3 – the TMDL is set. Loads are allocated to point and non-point sources and an implementation plan to meet load reductions is prepared
- Phase 4 – plans are implemented to reduce loads to the limits set in Phase 3, and to return the water body to meet water quality standards.

TMDL Progress in the Clearwater River Watershed

With the help of a 2003 MPCA grant, TMDL studies were conducted for two stretches of the Clearwater River, and for six lakes within the watershed. They include:

- Clearwater River between County Ditch 44 and Lake Betsy (bacteria and dissolved oxygen)
- Clearwater River between Grass Lake and the Mississippi River (dissolved oxygen)
- Lake Louisa (nutrients)
- Lake Betsy (nutrients)
- Clear Lake (nutrients)
- Lake Marie (nutrients)
- Scott Lake (nutrients)
- Union Lake (nutrients)

Both dissolved oxygen-impaired reaches will go to the MPCA's delisting committee to be recategorized as impaired due to natural causes. The TMDL studies have



been completed and published for public comment in July 2009. The draft TMDL report quantifies existing loads and required reductions. An implementation plan has been developed, with stakeholder input. And a monitoring plan to gauge effectiveness has been prepared.



- 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.crw.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 for more information.

For More Information

For more information about this study and how it relates to MPCA’s Impaired Waters programs, contact:

The findings of the TMDL study were presented at several public meetings held throughout the watershed. Project documents, including the draft implementation plan, are available at the Clearwater River Watershed District web site, www.crw.org.

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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.

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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.

