

# Watershed Planning – Impaired Waters

## *What is an impaired water?*

The State of Minnesota defines impaired waters as those lakes, rivers, streams, and wetlands that currently do not meet their designated beneficial use and associated water quality standards. For every lake, river, stream or wetland, the water quality standards define the maximum concentrations of specific pollutants that may be present in that water body without adversely affecting a particular designated use.

## *What are designated beneficial uses?*

In Minnesota, each river, stream, and lake was assigned a designated use in the 1970s. Designated uses of waters in Minnesota include aquatic life, recreation, drinking water, agriculture, wildlife and other uses.

## *How is a lake, river, stream or wetland determined to be impaired and what does this mean?*

The federal Clean Water Act requires the state of Minnesota to monitor the water quality of lakes, rivers and streams and then assess the condition of these water bodies. Once the water bodies are assessed, the Minnesota Pollution Control Agency must prepare a list of water bodies not meeting state water quality standards and not meeting their designated beneficial use. This list becomes the official impaired waters list.

Once a water body is listed as impaired, a study called a total maximum daily load or TMDL study must be conducted for each pollutant that causes a water body to fail to meet its designated use and associated state water quality standards. The result of a TMDL study is a written plan that analyzes the problem and determines how water quality standards can be met in the future. The TMDL study establishes the maximum amount of a pollutant that a lake, river, stream or wetland can receive and still meet water quality standards for the designated use.

## *What is the Council's role in impaired waters?*

The Council is working with local partners to help them develop the required TMDL study for impaired waters in their area.

First, the Council can provide extensive water quality data to communities to use in their assessments of water quality. The Council has been monitoring water quality for various pollutants in six watersheds in the metropolitan area since 1989. In 1995, the Council initiated a watershed outlet monitoring program that added 14 sites and in 1998 this program was further expanded to include nine additional sites. Currently the Council and our partners monitor 23 sites in the metropolitan area. This data is readily available for use in developing baseline water quality assessments. The Council also coordinates the Metro Geographic Information System (GIS) network which has GIS data layers for land cover, soils, topography, stream network, watershed boundaries and other data layers needed to run complex computer models.

Second, the Council has provided modeling expertise to partners. In particular, the Council used the Soil and Water Assessment Tool (SWAT) model to determine pollutant loading for four turbidity impairments on metropolitan area streams. The Council used its extensive water quality and GIS data bases and networks to calibrate and validate the SWAT model. Our partners were responsible for preparing the final report that went to the EPA for approval and leading the required stakeholder process, while the Council completed the modeling needed to determine load allocations for point and nonpoint sources of pollution and prepared a technical report on the modeling steps and processes.

For more information on the Council's impaired waters efforts, please contact:

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