



Mille Lacs Lake Watershed Management Group

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Topic of the Month - December 2019

What is a Watershed?

A watershed is an area of land that catches rain and snow and drains into a wetland, river, lake or groundwater. Homes, farms, cabins, forests, small towns, big cities and more are all parts of a watershed. They come in all shapes and sizes and can vary from millions of acres to a few acres that drain into a pond.

Mille Lacs Lake Watershed

The watershed of Mille Lacs Lake encompasses over 116,000 acres of land and 132,520 acres of water surface. Mille Lacs Lake itself occupies 207 square miles, or about 53% of the watershed. The Mille Lacs Lake Watershed falls within the jurisdiction of 3 counties - Aitkin, Crow Wing, and Mille Lacs - and the Mille Lacs Band of Ojibwe, plus the towns of Garrison, Wahkon, and Isle.

The Mille Lacs Lake Watershed has a small land area compared to its water surface area. Water enters the lake either through rainfall, inlets, or groundwater. Water exits the lake through only one outlet, the Rum River. These factors result in what is called "long water residency". This means that it may take as long as thirty years for water entering the lake to exit the lake. Pollution carried into the lake with the water, will also remain in the lake for a long period of time.



There are thirteen tributaries flowing into Mille Lacs Lake. These tributaries contain 73% of the surface water flow into the lake. The remaining 27% comes from the shoreline adjacent to the lake. The volume of water entering the lake through runoff is not great in comparison to the volume entering the lake in the form of rain. In an average year 81% of the inflow into Mille Lacs Lake comes from rainfall.



Rum River Watershed

The Mille Lacs Lake Watershed is part of a larger Rum River Watershed. This watershed begins with the Mille Lacs Lake Watershed and runs south to Anoka. It includes 1,584 square miles and portions of Aitkin, Crow Wing, Morrison, Mille Lacs, Kanabec, Benton, Isanti, Chisago, Sherburne, and Anoka counties. This watershed includes 212 lakes that are over 10 acres in size and 233 stream segments.



Intensive watershed monitoring, including biological, chemistry and flow monitoring, occurred in 2013. Volunteers and local government units, in addition to MPCA staff, conducted lake and stream monitoring at several key locations throughout the watershed. Only a handful of lakes do not meet

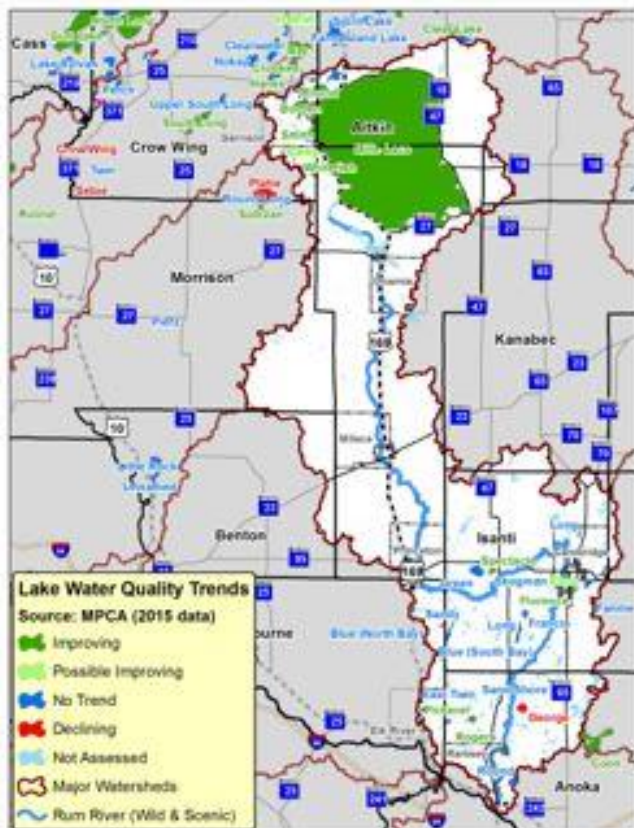
water quality standards for beneficial uses, such as aquatic recreation, drinking, and swimming. The main lake pollutant is phosphorus, causing algae blooms in summer months.

Total Maximum Daily Load (TMDL) studies were completed for six stream sections and ten lakes in this watershed. The TMDLs determine reductions of pollutants that are needed to meet the water quality standards.

For the remainder of the watershed a Watershed Restoration and Protection Strategies (WRAPS) report was developed. This report is the basis for implementation plans that will restore and protect water resources.

Together these documents lay out goals, milestones, and responsible entities to address water quality priorities in the watershed. Partners have already begun implementing recommended strategies.

Full reports are available at www.pca.state.mn.us and search for "Rum River"



Good water quality is essential to our way of life in northern Minnesota. Understanding how water moves through a watershed and how everything is connected is the first step in protecting water quality.

By Janet Smude, Aitkin County Soil and Water Conservation District