

Lake Learning

What is a TMDL?

More and more you will start hearing about TMDL studies. What are they, what do they mean, and where are they already scheduled to take place in the area?

First of all, TMDL stands for Total Maximum Daily Load. The Total Maximum Daily Load refers to specific pollutants as applied to specific water bodies. Basically, a TMDL defines how much of a certain pollutant a lake can accommodate (maximum load) and still meet its designated uses, such as fishing and swimming.

As I mentioned last week, a TMDL study is the next step for a lake once it is included on the MPCA Impaired Waters List. <http://www.pca.state.mn.us/water/tmdl/tmdl-303dlist.html>

For ease in explaining a TMDL study in this article, I will explain what it involves for a lake that is impaired for excess nutrients (phosphorus) in regards to aquatic recreation (swimming). Excess phosphorus is considered an impairment because phosphorus is food for plants and algae so the more phosphorus there is, the more algae there is that makes the lake undesirable for recreation.

Once a lake is deemed impaired due to excess nutrients, a TMDL involves a close study of a lake and all the potential sources of phosphorus. Phosphorus can enter a lake from external sources such as over land runoff, and stream inlets, or through internal sources such as the lake sediments and carp. During a TMDL study, researchers determine all the possible phosphorus sources to a specific lake and quantify how much phosphorus is coming from each source. From this information, one can identify which sources are the highest contributors of phosphorus in a lake and determine which phosphorus sources they can control and set goals to reduce.

The result of a TMDL study is a plan for how to achieve nutrient reduction so the lake can start the road to recovery. It can be a long process, but the end result will be good for the lake. Federal and state regulations and programs also require implementation of restoration measures to meet TMDLs.

Enjoy the lakes! This article was written and shared by Moriya Rufer at RMB Environmental Laboratories as part of continuing education for their Lakes Monitoring Program (218-846-1465, lakes@rmbel.info). To learn more, visit www.rmbel.info.