



Minnesota
Pollution
Control
Agency

Industrial
Division

Municipal
Division

Water Quality
Program

Pre-TMDL Phosphorus Trading

Point Source Discharge to Impaired Waters

A Draft Guidance

Water Quality, Pre-TMDL Phosphorus Trading 1-01 • UPDATED: June 2007

Based on the federal Clean Water Act, waters that do not meet water quality standards are “impaired.”

The Clean Water Act requires states to develop a clean-up plan for each impairment affecting a water body. The clean-up plan is a Total Maximum Daily Load (TMDL).

Developing a TMDL requires detailed study of the water body and often involves several years of data collection and analysis. A TMDL must identify all sources of the pollutant causing a water body to violate standards. The TMDL also determines the amount by which each source must reduce its contribution to ensure a water body can meet applicable quality standards.

Point Source Discharge to Impaired Waters

Federal regulations 40 C.F.R. 122.4(i) and 40 C.F.R. 122.44(d)(1) prohibit new or expanding discharge to impaired waters that could *cause or contribute to an impairment*. These regulations protect waters from further degradation while a TMDL is in development.

Impairments caused by excess nutrients such as phosphorus, affect waters in nearly every part of the state. Nutrients enter surface waters from many sources including run-off from agricultural lands and urban stormwater. Discharges from wastewater treatment plants and other point sources may also contain phosphorus and other nutrients.

Pre-TMDL Phosphorus Trading

To be protective of the environment, fulfill the requirements of the Clean Water Act and meet the needs of communities, the MPCA developed draft Pre-TMDL Phosphorus Trading (PTPT) guidance. PTPT allows new and expanding wastewater treatment facilities, discharging to a nutrient-impaired water, to receive a discharge permit prior to completion of the applicable TMDL.

Through PTPT, a new or expanding facility may increase its phosphorus discharge by purchasing a phosphorus reduction at another permitted facility. The MPCA documents the transfer of nutrient load, or trade, through the water quality permitting process. Permits for facilities taking advantage of pre-TMDL Phosphorus Trading must ensure that there is an overall decrease in the authorized phosphorus entering the impaired water.

To ensure a net decrease in the total phosphorus load to a nutrient-impaired water, buyers must purchase an extra percentage of their required phosphorus load. The purchase of extra phosphorus load is calculated through a Trade Ratio.

Trade Ratios and Boundaries

Existing facilities seeking to expand hydraulic and/or organic treatment capacities are required to purchase an additional ten percent of the traded load (a 1.1 to 1 Trade Ratio). New facilities are required to purchase an additional 20 percent of the traded load (a 1.2 to 1 Trade Ratio).

The facility purchasing an increase in its phosphorus load has its mass limit adjusted up while the seller has its mass limit adjusted down. The adjusted limits become part of each facility's individual discharge permit. Neither facility may apply the extra percentage of phosphorus purchased through the trade ratio to their mass limit – that unused phosphorus load is a contribution toward water quality improvement.

Trade ratios may be adjusted based on geographic parameters such as the location of each facility within the drainage basin, the distance between trading facilities and the distance of each facility to the applicable impaired water. Both the buyer and the seller must discharge upstream of the identified impaired water. The MPCA will not approve trades that will make worse the violation of a water quality standard.

The MPCA intends to review all trade proposals on a case-by-case basis. Proposals that do not meet the general guidelines above may be considered if they provide viable options and prove to be protective of downstream waters. This includes non-point source to point source trades.

Pre-TMDL Phosphorus Trading is a voluntary program. Permits issued under this program are valid until the applicable TMDL is complete. When the TMDL is complete, all permits will be adjusted to reflect the requirements of the TMDL.

The MPCA developed Pre-TMDL Phosphorus Trading to address new and expanding phosphorus dischargers upstream of excess nutrient-impaired Lake Pepin. However, the program also applies to other excess nutrient-impaired water bodies.

PTPT is currently in draft form. This proposed guidance will be presented to the MPCA Citizens' Board as an information item in July 2007 and again as a decision item in October 2007. Interested parties are invited to attend the meetings and share comments, questions and suggestions with the Board and MPCA staff. The MPCA Citizens' Board schedule is available online at <http://www.pca.state.mn.us/about/board/index.html>.

For More Information

Online Resources

Impaired Waters and TMDLs

<http://www.pca.state.mn.us/water/tmdl/index.html>

Draft Pre-TMDL Permitting Guidance

<http://www.pca.state.mn.us/water/tmdl/ptpt.html>

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