

MARTIN AND TYPO LAKES TOTAL MAXIMUM DAILY LOAD (TMDL) STUDY



TMDL
Study



Project Summary

Typo and Martin Lakes, and the stream segment between the lakes, were listed as “impaired” by the Minnesota Pollution Control Agency (MPCA) for failing to meet water quality standards. Water quality is extremely poor in Typo Lake, where water clarity is seldom greater than 10 inches. Martin Lake is somewhat better, but still poor. The water quality problems significantly affect fisheries, recreation, and property values.

All impaired waters must undergo a TMDL study that determines the source of pollutants and strategies for improvement. The study found:

Martin Lake

41% phosphorus reduction needed to meet water quality standards.

Phosphorus sources, include

- Typo Lake (66.4%)
- Remaining watershed (24.8%)
- Island Lake (5.7%)
- Septic systems (2.3%)
- Atmospheric (0.8%)
- These are modeling results, and thought to underestimate internal phosphorus loading from in-lake sources like carp and wind mixing.

Typo Lake

81% phosphorus reduction needed to meet water quality standards.

Phosphorus sources, include

- Watershed (87.1)
- In-lake (11.6%)
- Septic systems (0.4%)
- Atmospheric (0.9%)
- These are modeling results, and thought to underestimate internal phosphorus loading from in-lake sources like carp and wind mixing.

A TMDL Implementation Plan has been prepared and approved. That plan outlines projects and efforts needed to improve water quality in these lakes.

The full TMDL report can be viewed on the MPCA website.

Typo Lake



Martin Lake



Timeline

| | |
|------|--|
| 2001 | Field study begins |
| 2003 | Majority of field study completed Various study, revision, and administrative delay |
| 2012 | TMDL approved by EPA and MPCA |

Funding Sources

| |
|-----------------------------|
| MN Pollution Control Agency |
| Martin Lakers Association |
| Anoka Conservation District |
| Anoka County Ag Preserves |

Water Quality Improvement Efforts

The TMDL provides information about the degree of water quality impairment, pollution sources, and desirable projects to improve the situation. It does not, however, provide funding toward these ends. Local entities such as the Sunrise River Watershed Management Organization, Anoka Conservation District, Linwood Township, and Martin Lakers Association are providing leadership for water quality improvement. Projects installed or planned include:

- Multiple lakeshore restorations (multiple years)
- Three rain gardens around Martin Lake (2011)
- Four carp barriers (2014)
- New stormwater pond at Martin Lake (~2004)