

Summary

Monitoring and Assessment Report

Lake Superior - North Watershed



Why is it important?

The Lake Superior - North watershed in far northeastern Minnesota contains some of the least-polluted water bodies in the state. These high-quality streams, lakes, wetlands, and beaches support sensitive aquatic species and provide enjoyment for fishing, boating, and other forms of aquatic recreation.

However, increasing development, a changing climate, and a variety of land uses may contribute stress to these high-quality resources. Maintaining the high quality of the Lake Superior North's aquatic resources is important to local citizens and those concerned with waters flowing into the greatest of the Great Lakes.

Key issues

The MPCA and several partners will identify the stressors in the watershed following an intensive water monitoring and assessment effort that is part of the state's watershed approach to restoring and protecting Minnesota waters.

Two streams were determined to carry excess loads of suspended sediment which negatively impacts aquatic life; restoration efforts are already underway on each of these impaired streams.

A small number of lakes appear to be experiencing a declining trend in transparency. Although these lakes are still meeting water quality standards, these declines may be related to lakeshore development. Protection strategies should be developed for these lakes in order to prevent future impairments.

No aquatic recreation impairments were identified; this indicates that the watershed's streams and beaches are generally safe for swimming, boating, and other forms of body-contact recreation. The watershed's lakes were found to harbor low levels of nutrients and algae.

Exceptional biological communities (fish and aquatic macroinvertebrates) were documented in more than 40 percent of monitored streams; most support brook trout and other cold-adapted fishes and sensitive aquatic macroinvertebrates were widespread and abundant. These high quality streams are excellent candidates for protection efforts.

Highlights of report

- High water clarity and low levels of algae indicate 94 lakes support aquatic recreation and none of the assessed lakes were impaired for this use.
- Ninety-nine lakes have fish with high levels of mercury, which is the watershed's dominant fish tissue contaminant. Fish consumption advisories are recommended for lakes across the watershed.
- Water chemistry and the amounts and types of fish and bugs found in 63 streams indicate full support of aquatic life.

Highlights continued

- Two streams were impaired for aquatic life due to high levels of suspended sediment. Restoration efforts are underway to address these impairments.
- Low levels of bacteria in 18 streams and 27 Lake Superior beaches indicate that these streams and beaches support aquatic recreation.
- To improve the watershed's water quality, the MPCA recommends:
- Identifying and addressing potential threats to lake water quality (e.g., non-compliant septic systems) on some lakes including Poplar, Deer Yard, Devil Track and Tom.
- Making the highest protection priority for six lakes: Tom, Devil Track, Hungry Jack, Poplar, Birch, and Deer Yard.
- Establishing protection strategies that encourage development design and related BMPs that promote good water quality and aquatic habitat.
- Continuing regional collaborative efforts to manage forests in a way that promotes good water quality and aquatic habitat in addition to forest health and resiliency.
- Identifying and prioritizing rehabilitation of problematic road-stream intersections.
- Considering the effects of a changing climate when planning both short- and long-term management of aquatic resources.

About this study

Beginning in 2013, the MPCA and local partners conducted intensive watershed monitoring of the watershed's surface waters. One hundred thirty five lakes, 67 streams and 27 Lake Superior beaches were monitored. The resulting water chemistry and biological data were used to determine whether these water bodies support aquatic life and recreational uses.



Full report

To view the full report, visit www.pca.state.mn.us/water/watersheds/lake-superior-north or search for "Lake Superior - North watershed" on the MPCA website.

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