Monitoring and assessment report summary

# Lac qui Parle River Watershed

## Why is it important?

The Minnesota Pollution Control Agency (MPCA) watershed monitoring strategy uses an effective and efficient integration of agency and local water monitoring programs to assess the condition of Minnesota's surface waters. The report provides a summary of all water quality assessment results and incorporates all data available for the assessment process.

The Lac qui Parle River Watershed begins in South Dakota and drains an area of approximately 1,100 square miles (704,000 acres). Approximately 70% of this area lies within portions of Minnesota's Lac qui Parle, Yellow Medicine, and Lincoln counties.

## Key issues

The water quality watershed-wide is significantly degraded. Fewer than 3% of the assessed reaches were determined to be fully supporting for aquatic life. Stream water chemistry data indicate that surface water quality is poor with widespread bacterial contamination, elevated nutrients, and dissolved oxygen issues beyond the permissible thresholds.

## Highlights of report

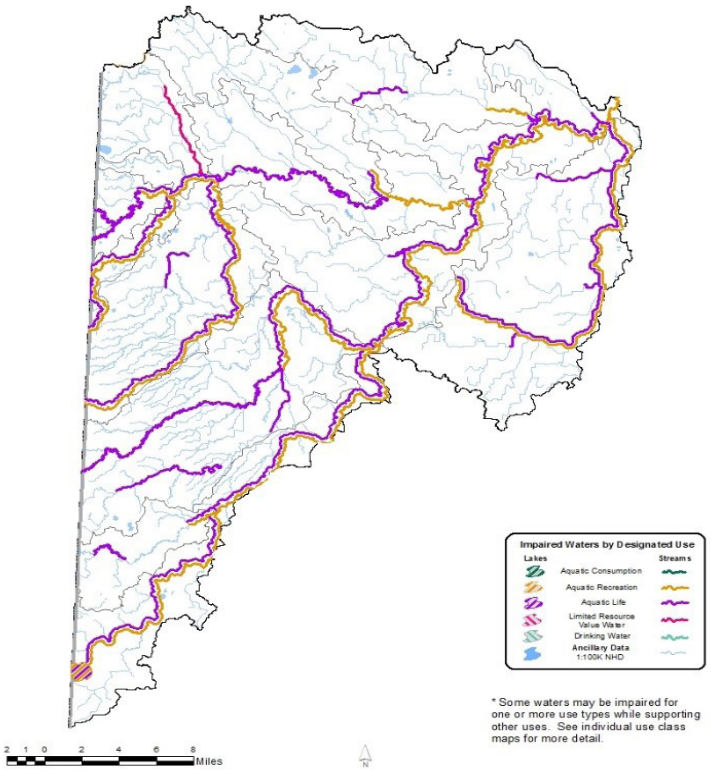
Scores of biological communities in this watershed were resoundingly poor; not a single general use stream in the Lac qui Parle River Watershed fully supported aquatic life use. Only one stream (< 3% of assessed reaches) was determined to be fully supporting aquatic life for modified use waters (which have lower biological expectations than general use waters). Of 16 stream reaches with sufficient chemistry data to make an assessment, not a single stream was determined to be supporting aquatic recreation.

Fish communities were frequently dominated by species that are capable of persisting in degraded and sub-marginal habitats. Fish communities were diverse and balanced in some stream reaches. Some sensitive, intolerant species were observed in the watershed. Pearl dace, a species that has not been verified in the Minnesota Basin since 1954, were sampled in Cobb Creek in a June 2015 visit.

Lake Hendricks was listed as impaired in 2009 for aquatic recreation and data collected during the Intensive Watershed Monitoring process may be indicative of minor improvements. Further monitoring will be necessary to determine if these improvements represent a long-term trend in improving water quality or merely an artifact of natural variation. Monitoring of fish communities in Lake Hendricks revealed a dominance of tolerant species; aquatic life use standards are not being met.

Del Clark Lake fully supports aquatic recreation, meeting standards for total phosphorus, chlorophyll-a, and water clarity (Secchi disk). Lake protection modeling identified Del Clark Lake as a priority lake for efforts to reduce phosphorus loading in the future. Riparian land management within and upstream of Stonehill Regional Park are likely contributors to the elevated water quality in this lake.

## **Highlights** (cont.)




Groundwater quality in the Lac qui Parle River Watershed is considered poor when compared with other regions with comparable aquifers. Exceedances of drinking water standards for manganese and boron were the primary concern for those from natural sources, and nitrate was the primary concern associated with anthropogenic (human development) sources.

## Recommendations

The adoption of best land management practices such as an implementation of perennial vegetation buffers along stream reaches, improved runoff control, and reduce nutrient loading to surface waters overland runoff would have profound benefits to water quality and biological communities throughout the region.

## About this study

The watershed approach is a 10-year rotation for monitoring and assessing waters of the state on the level of Minnesota's 80 major watersheds. This was implemented in the Lac qui Parle River Watershed beginning in the summer of 2015. It includes an interagency Watershed Pollutant Load Monitoring Network, intensive watershed monitoring, and citizen monitoring.

## Full report

To view the full report, go to https://www.pca.state.mn.us/water/watersheds/lac-qui-parle-river, or search for "Lac qui Parle River watershed" on the MPCA website: www.pca.state.mn.us.

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