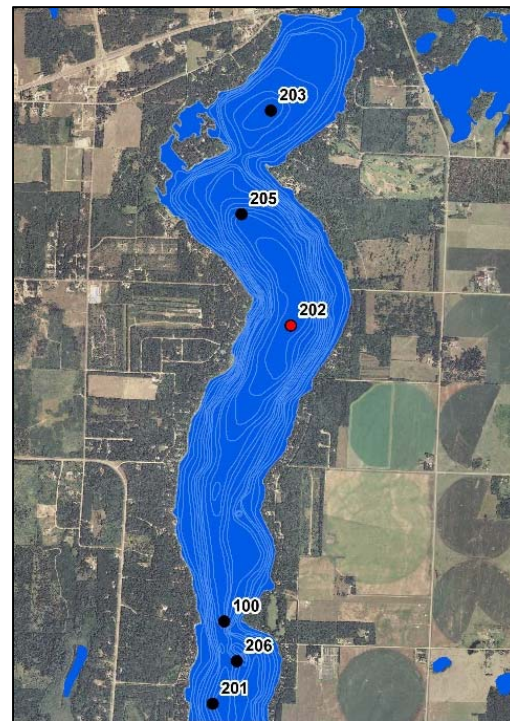# Long Lake   Hubbard County

Summary

Long Lake has good water quality, and is within the expected water quality range for the ecoregion. Long-term trend analysis shows an improving trend in phosphorus and transparency. Potential lake impacts could come from shoreline runoff, septic systems, agriculture to the east, and the inlet to the lake. Residents can continue best management practices to protect the water quality into the future.

Lake Vitals

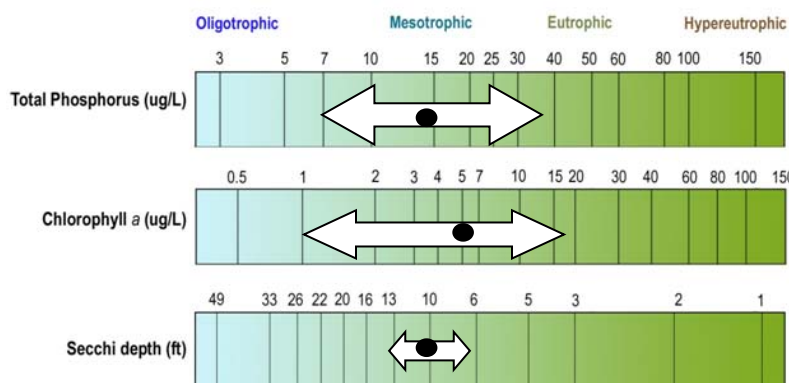|	
MN Lake ID:	29-0161-00
Ecoregion:	Northern Lakes and Forests
Major Drainage Basin:	Upper Mississippi River
Surface area (acres):	1974
Littoral area (acres):	468
% Littoral area:	24
Max depth (ft), (m):	135, 41.1
Inlets / Outlets:	2 inlets / 1 outlet
Public Accesses	4
Development Class:	Recreational Development
Aquatic Invasive Species:	None Listed

Water Quality Characteristics

Years monitored: 1997-2017

Parameters	Historical
Phosphorus Mean (ug/L):	14.1
Phosphorus Min (ug/L):	7.0
Phosphorus Max (ug/L):	36.0
Number of Observations:	99
Chlorophyll-a Mean (ug/L):	5.7
Chlorophyll-a Min (ug/L):	1.0
Chlorophyll-a Max (ug/L):	17.0
Number of Observations:	97
Secchi Depth Mean (ft):	10.8
Secchi Depth Min (ft):	7.0
Secchi Depth Max (ft):	14.5
Number of Observations:	97

Trophic State Index

Trophic State: Mesotrophic (43.7)

The figure below shows the minimum and maximum values with the arrows and the mean with the black dot.

Long-term Trends

Primary site only. Recommend minimum of 8-10 years of data with 4+ readings per season. Minimum confidence accepted by MPCA is 90%

Data Quality	Excellent
Total Phosphorus:	Decreasing, indicates improving water quality (90% confidence).
Chlorophyll-a:	No significant trend exists.
Secchi Depth:	Increasing, indicates improving water quality (95% confidence).

Ecoregion Comparisons

(Primary site only. Comparisons are based on interquartile range, 25th - 75th percentile, for ecoregion reference lakes)

Ecoregion:	Northern Lakes and Forests
Total Phosphorus:	Within Expected Range
Chlorophyll-a:	Within Expected Range
Secchi Depth:	Within Expected Range