Little Comfort Lake
2017 Lake Grade: C

- DNR ID #: 13005400
- Municipality: Chisago City
- Location: Section 27 T33N-R21W
- Lake Size: 36 acres
- Ordinary High Water Mark: 887.2 ft.
- 44% Littoral
  Note: Littoral area is the portion of the lake <15 ft. and dominated by aquatic vegetation.

Summary Points

- Based on the chlorophyll-\(a\) results Little Comfort Lake was considered eutrophic in 2017, according to the Carlson Trophic State Index.
- Using the 2-tailed Kendall Tau correlation test (p<0.05) there is a statistically significant \textit{declining} trend for the average Secchi transparency at this time and average chlorophyll-\(a\) and no trend for the average total phosphorus.
- The major land use is rural/agricultural.
- The lake stratified in 2017 with the thermocline varying between 3 and 5 meters.
- Little Comfort Lake is listed as impaired for nutrients on the Minnesota Pollution Control Agency’s Impaired Waters List.
- Curly-leaf pondweed (invasive aquatic plant) is present in this lake. A report has been made of the presence of Eurasian watermilfoil but that has yet to be verified.
## Lake Water Quality Summary

### Lake Grades

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</thead>
<tbody>
<tr>
<td>Total Phosphorus (mg/L)</td>
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<tr>
<td>Chlorophyll-a (µg/L)</td>
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<td>Secchi depth (ft)</td>
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<td>Overall</td>
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### Volunteer Data

- **Date/Time**: 05/07/2017 15:00
  - **Total Phosphorus** (mg/L): 0.046
  - **Chlorophyll-a** (µg/L): 8.1
  - **Secchi Depth** (ft): 5.3

- **Date/Time**: 05/17/2017 13:00
  - **Total Phosphorus** (mg/L): 0.027
  - **Chlorophyll-a** (µg/L): 7.5
  - **Secchi Depth** (ft): 6.2

#### Water quality thresholds are 0.04 mg/L TP, 14 µg/L CL-a, 1.4 m Secchi depth

#### Shallow lake water quality thresholds are 0.06 mg/L TP, 20 µg/L CL-a, 1.0 m Secchi depth

### Little Comfort Lake Summer Averages for Total Phosphorus & Chlorophyll-a

#### TP summer Avg. (µg/L)

- **Date/Time**: 05/07/2017 15:00
  - **Total Phosphorus** (mg/L): 0.046
  - **Chlorophyll-a** (µg/L): 8.1

- **Date/Time**: 05/17/2017 13:00
  - **Total Phosphorus** (mg/L): 0.027
  - **Chlorophyll-a** (µg/L): 7.5

### Lake Water Quality Summary

#### Water quality thresholds are 0.04 mg/L TP, 14 µg/L CL-a, 1.4 m Secchi depth

#### Shallow lake water quality thresholds are 0.06 mg/L TP, 20 µg/L CL-a, 1.0 m Secchi depth

### Data requirements and determinations of use assessment according to the MPCA’s Guidance Manual for Assessing the Quality of Minnesota Surface Waters:

- "Samples must be collected over a minimum of 2 years and data used for assessments must be collected from June to September. Typically, a minimum of 8 individual data points for TP, corrected chlorophyll (chl-a corrected for pheophytin), and Secchi are required. Data used for phosphorus and chlorophyll-a calculations are limited to those collected from the upper most 3 meters of the water column (surface). If more than one sample is collected in a lake per day, these values are averaged to yield a daily average value. Following this step, all June to September data for the 10-year assessment window are averaged to determine summer-mean values for TP, corrected chl-a, and Secchi depth. These values are then compared to the standards and the assessment is made."
Little Comfort Lake
Water Surface Elevation Statistics

Outlet Elevation: 885.7 ft.

Ordinary High Water Level (OHW) Elevation: 887.2 ft.

100 Year Flood Elevation (CLFLWD): 892.1 ft.

Highest Recorded Elevation: 887.81 ft. (05/08/2001)

Lowest Recorded Elevation: 885.41 ft. (09/05/2003)

Datum: NGVD 29 (ft.)

*Elevation data has not been recorded on this lake since 2004.