

BIG COMFORT LAKE

Fast Facts:

DNR Lake ID: 13-0053-00

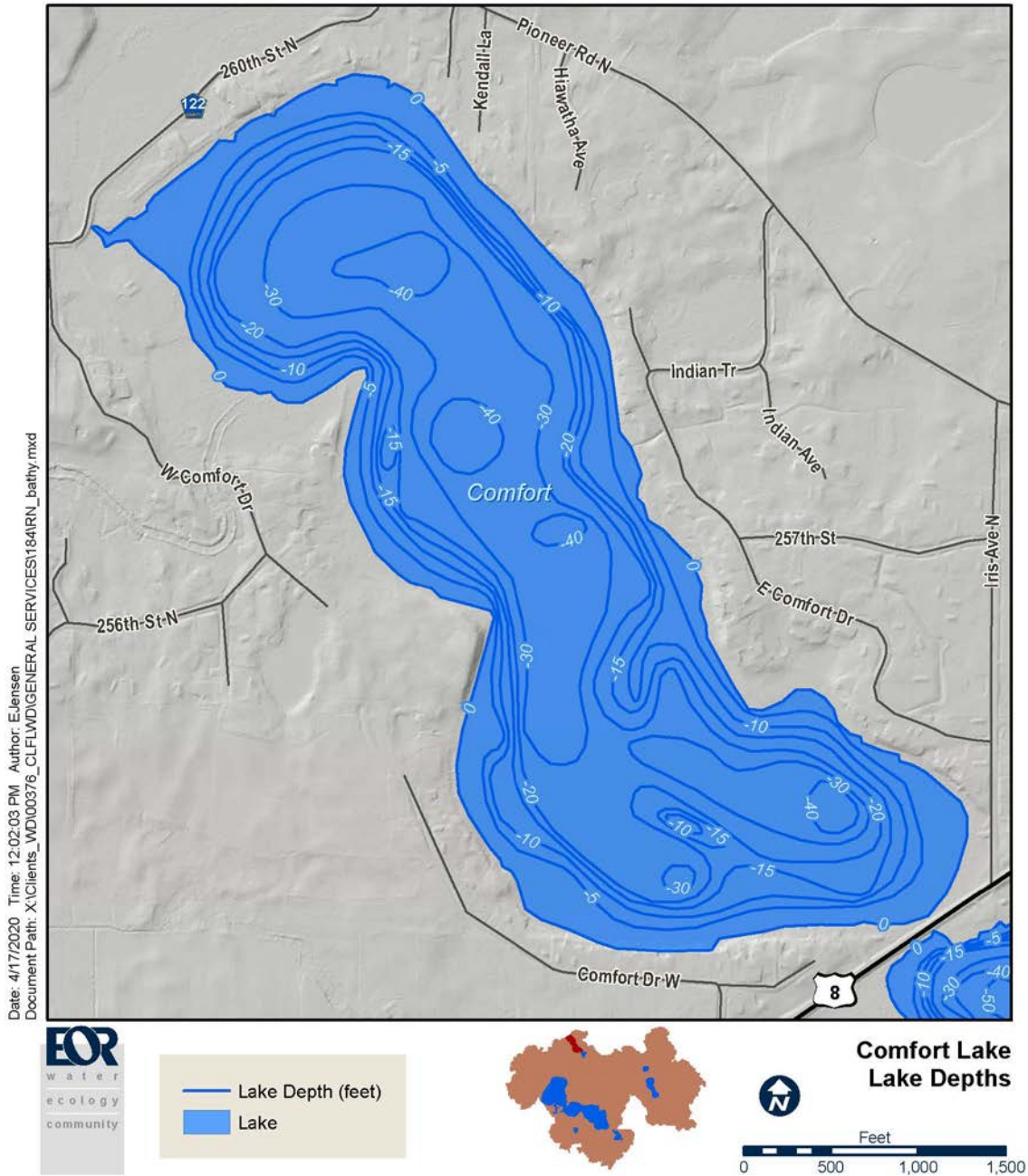
County: Chisago

Surface Area: 218 acres

Littoral Area (depths less than 15 feet): 90 acres

Maximum Depth: 47 feet

Shore Length: 3.24 miles



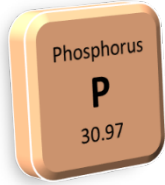
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2019 Surface Water Quality Summary

Nutrients:

June-Sept. Average Total Phosphorus (TP, $\mu\text{g/L}$)

26 $\mu\text{g/L}$



Algae:

June-Sept. Average Chlorophyll-a (Chl-a, $\mu\text{g/L}$)

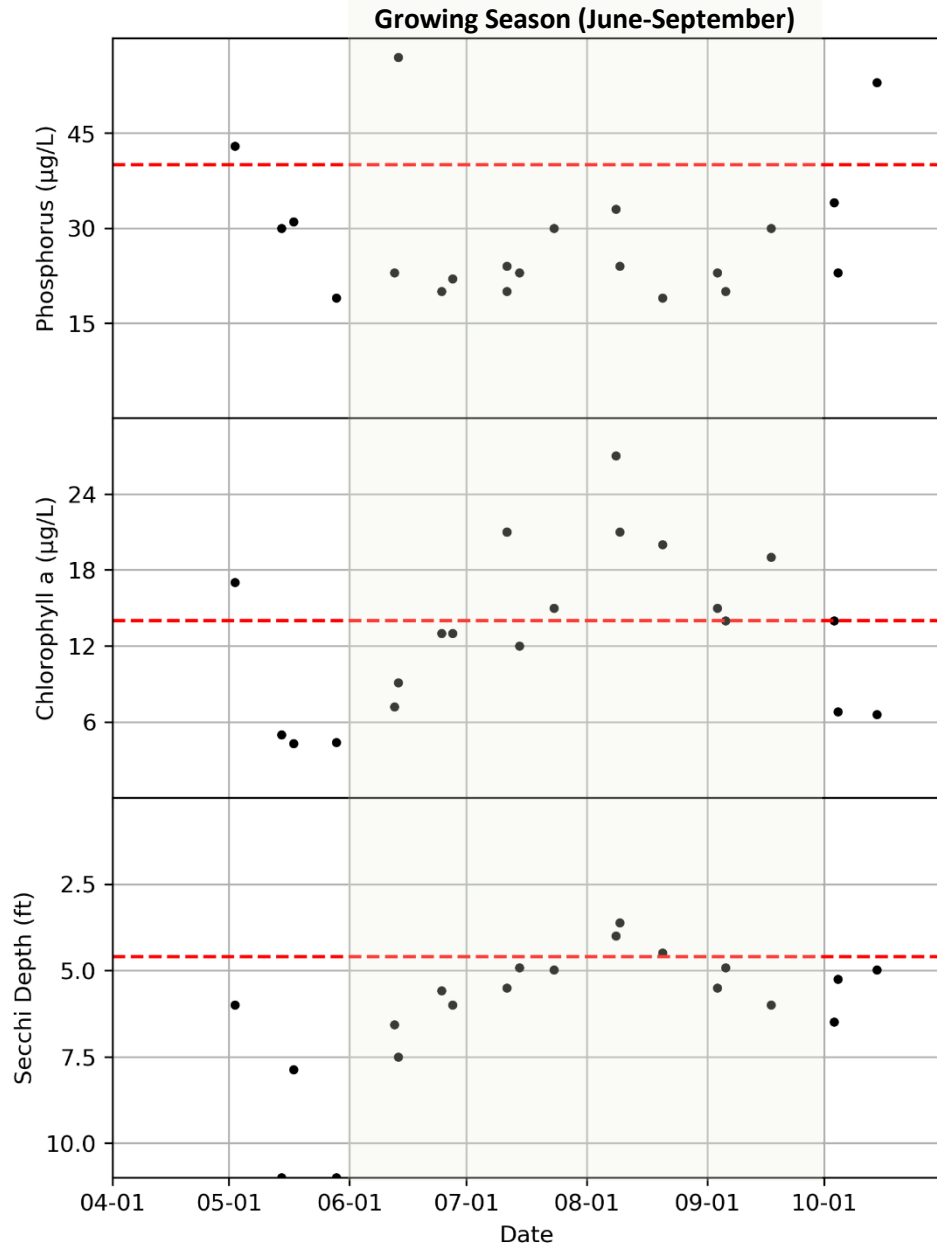
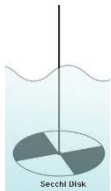
16 $\mu\text{g/L}$



Clarity:

June-Sept. Average Secchi Depth (Secchi, ft)

5.3 feet



State standard are shown with a dashed red line. Phosphorus = 40 $\mu\text{g/L}$, Chlorophyll-a = 14 $\mu\text{g/L}$, Secchi Depth = 4.6 feet. Sample points are shown in black dots. Points above the line are worse than the State standard. Points below the line are better than the State standard.

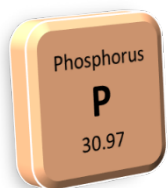
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Historical Water Quality Summary

	Phosphorus ($\mu\text{g/L}$)	Chl-a ($\mu\text{g/L}$)	Secchi (feet)
State Standard	< 40	< 14	> 4.6
10-year Average (2010-2019)	33	16	5.4
2040 District Goal	< 30	n/a	> 7.0
5-year Average (2015-2019)	31	15	6.0

Nutrients:

June-Sept. Average
Total Phosphorus
(TP, $\mu\text{g/L}$)



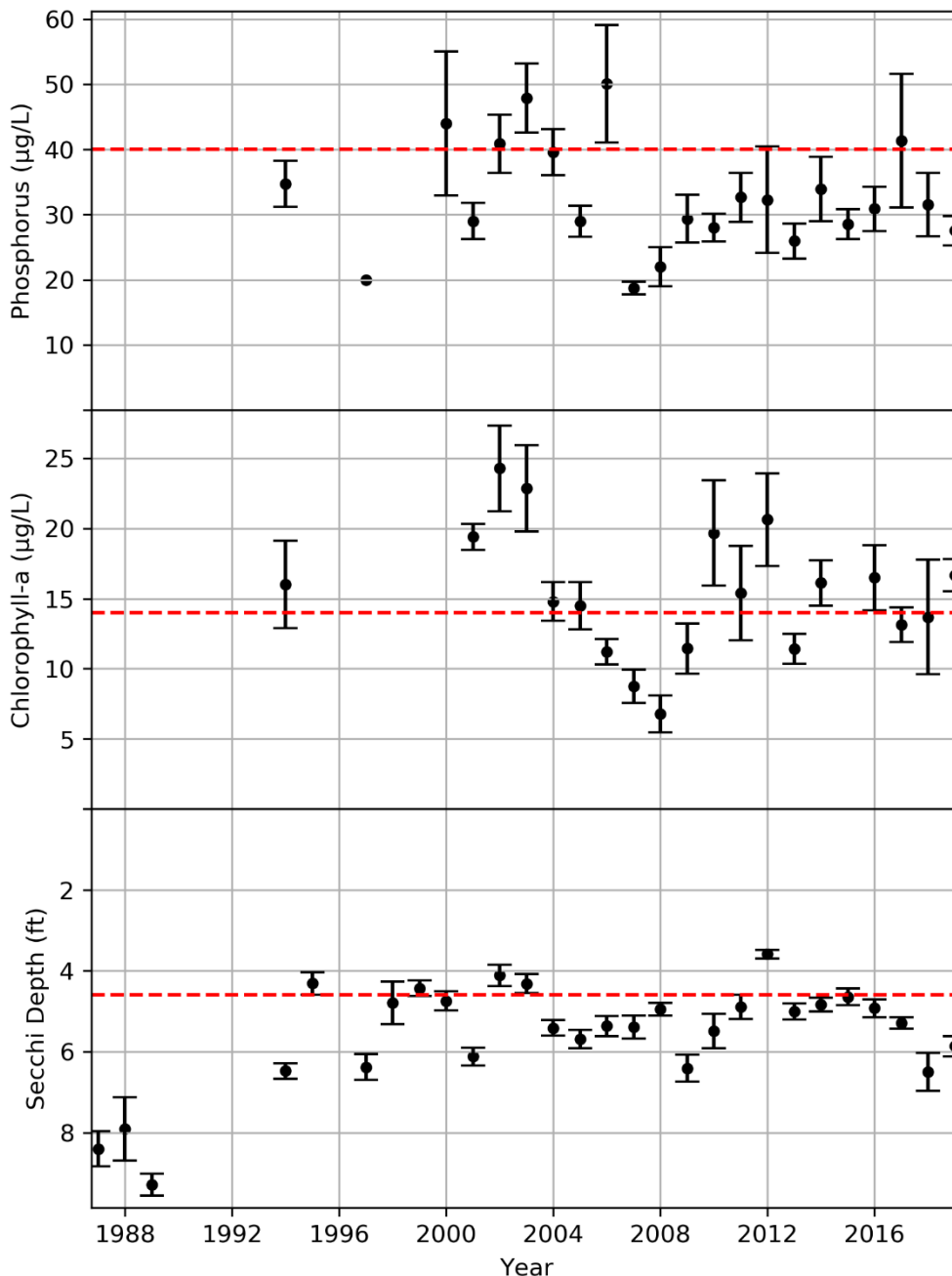
Algae:

June-Sept. Average
Chlorophyll-a
(Chl-a, $\mu\text{g/L}$)



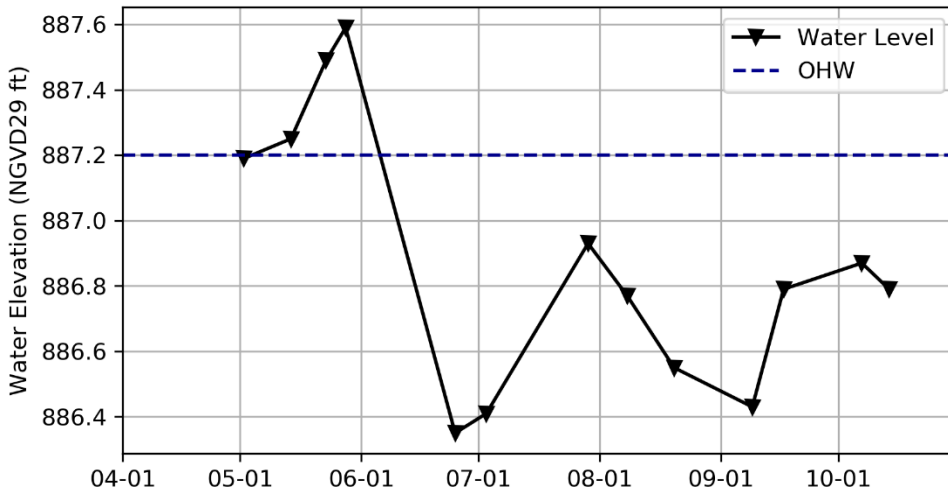
Clarity:

June-Sept. Average
Secchi Depth
(Secchi, ft)



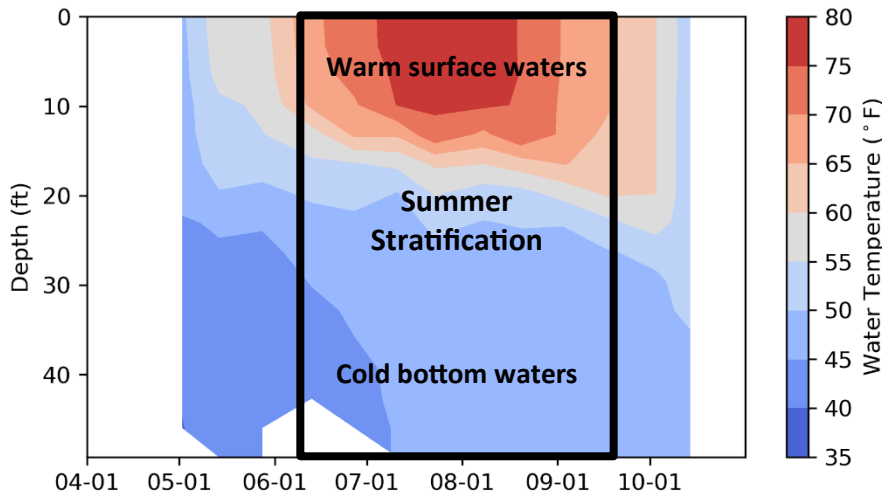
State standard are shown with a dashed red line: Phosphorus = 40 $\mu\text{g/L}$, Chlorophyll-a = 14 $\mu\text{g/L}$, Secchi Depth = 4.6 feet. Growing season averages are shown as black points. Points above the line are worse than the State standard. Points below the line are better than the State standard.

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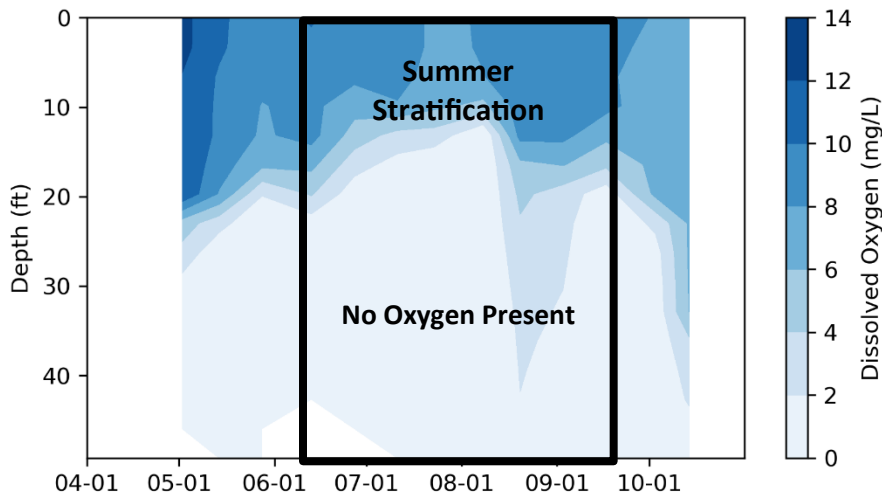
2019 Lake Levels

Lake levels ranged over a total of 1.24 feet; between a minimum of 886.35 feet on June 25, 2019 and a maximum of 887.59 feet on May 28, 2019.



2019 Temperature Profiles

The lake was stratified from mid-June until mid-September.



2019 Dissolved Oxygen Profiles

Grey represents the duration and depths where no oxygen is present and sediment phosphorus can be released and contribute to internal loading.

Internal loading was possible throughout the growing season. A potential mixing event may have occurred mid-August as indicated by the small spike in bottom water oxygen.