

BIRCH LAKE

Fast Facts:

DNR Lake ID: 13-0042-00

County: Chisago

Surface Area: 32 acres

Littoral Area (depths less than 15 feet): 32 acres

Maximum Depth: 8 ft

Shore Length: 0.74 miles



Date: 2022-03-14T12:59:41.917 Author: Ehlersen Layout: Comfort Lake CLFLWD Document Path: X:\Clients_WD\00276_CLFLWD\0010_General_Watershed_Eng\3000_Program\3003A_monitoring\07_gis\lake_aerials.cgz



-  Lakes
-  Lake Management District



CLFLWD Birch Lake



0 90 180 ft

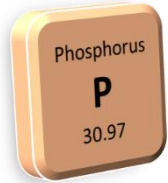
BIRCH LAKE

2021 Surface Water Quality Summary

Nutrients:

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

71.8 $\mu\text{g/L}$



Algae:

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

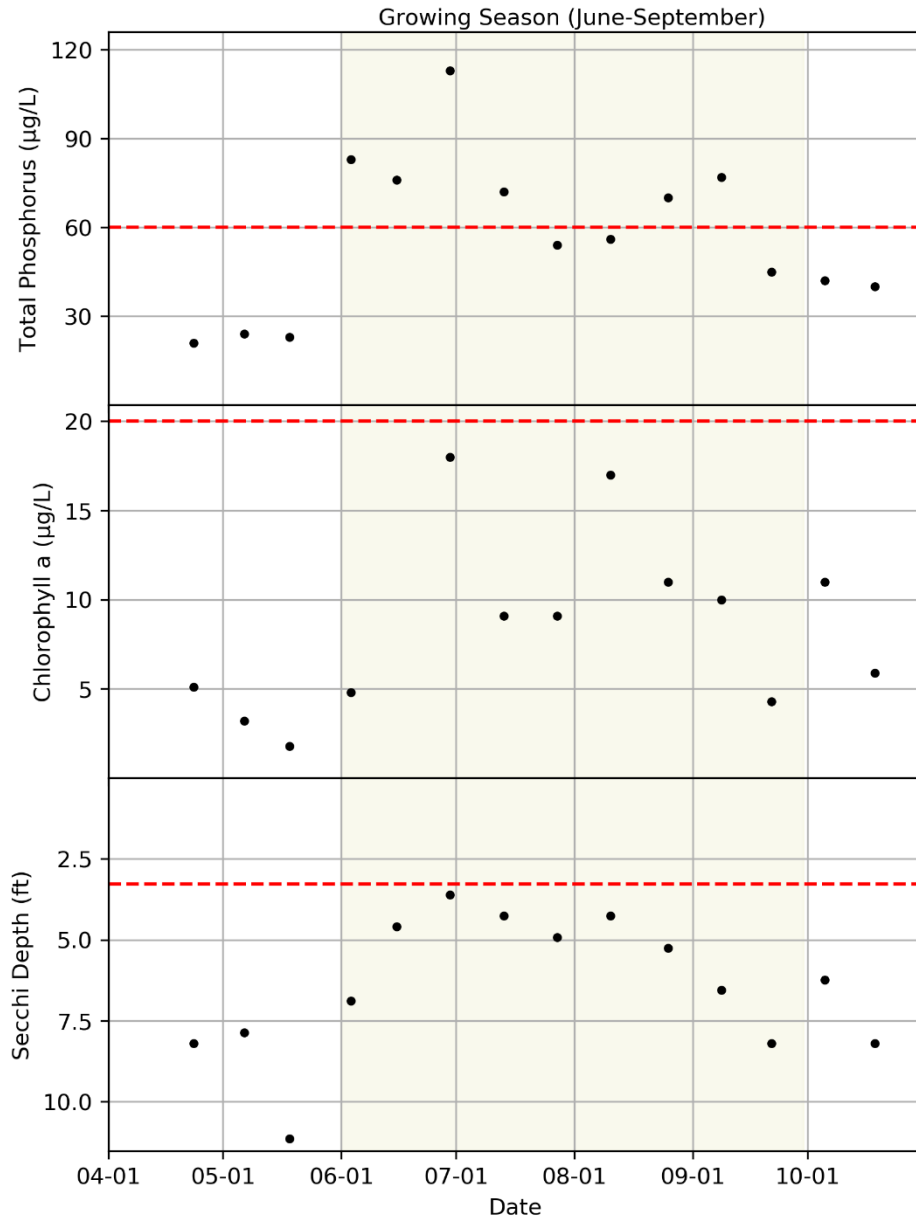
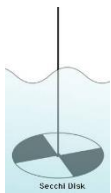
10.4 $\mu\text{g/L}$



Clarity:

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

5.4 feet



State standard are shown with a dashed red line. Phosphorus = 60 $\mu\text{g/L}$, Chlorophyll-a = 20 $\mu\text{g/L}$, Secchi Depth = 3.3 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.

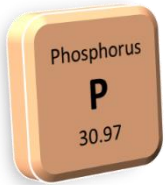
BIRCH LAKE

Historical Water Quality Summary

	Phosphorus ($\mu\text{g/L}$)	Chl-a ($\mu\text{g/L}$)	Secchi (feet)
State Standard	< 60	< 20	> 3.3 feet
10-year Average (2012-2021)	80.8	13.2	5.0
2040 District Goal	< 60	n/a	> 3.3
5-year Average (2017-2021)	80.8	13.2	5.0

Nutrients:

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



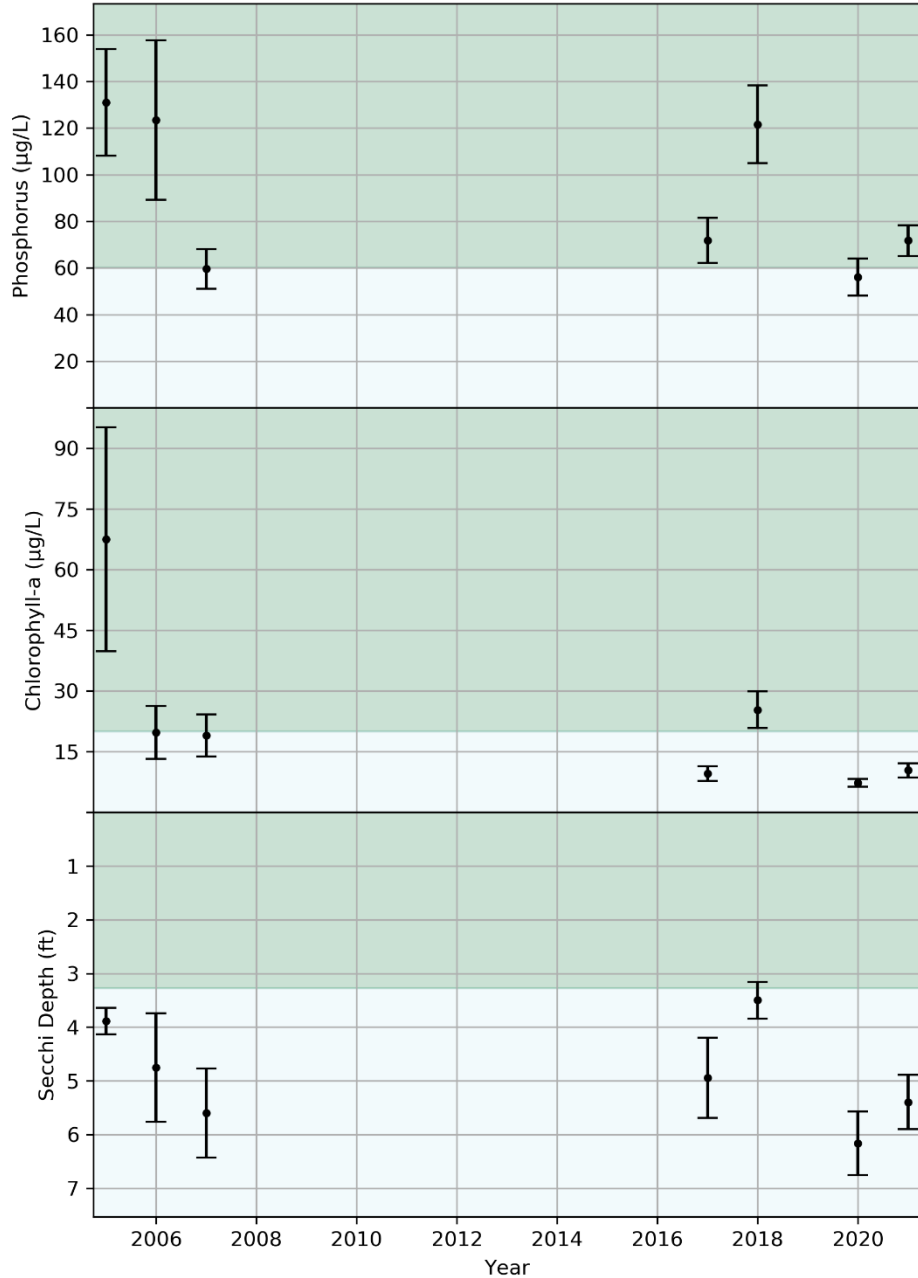
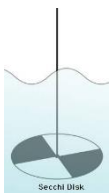
Algae:

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



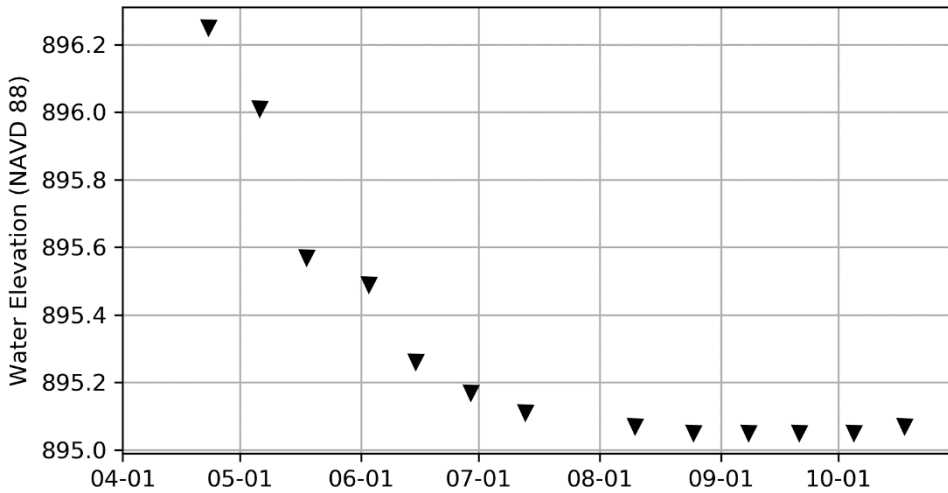
Clarity:

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



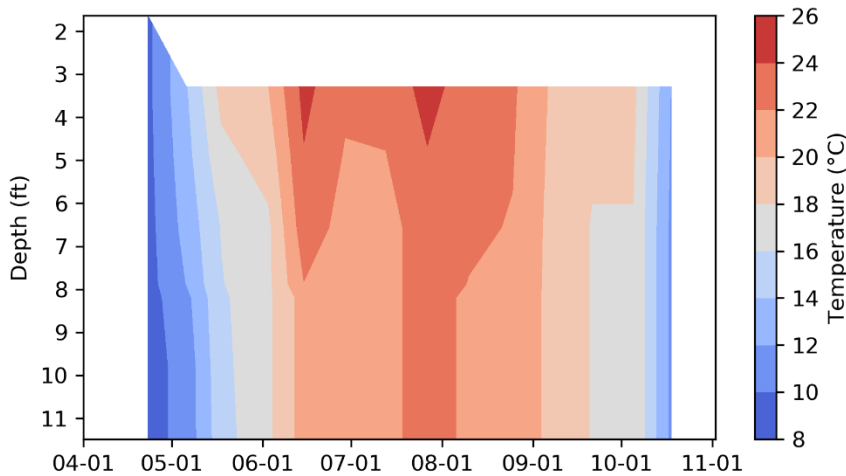
State standard are shown as the boundary between green and light blue. (Phosphorus = 60 $\mu\text{g/L}$, Chlorophyll-a = 20 $\mu\text{g/L}$, Secchi Depth = 3.3 feet. Growing season averages are shown as black points. Points in the green area are above the state standard. Points in the light blue area are better than the State standard.

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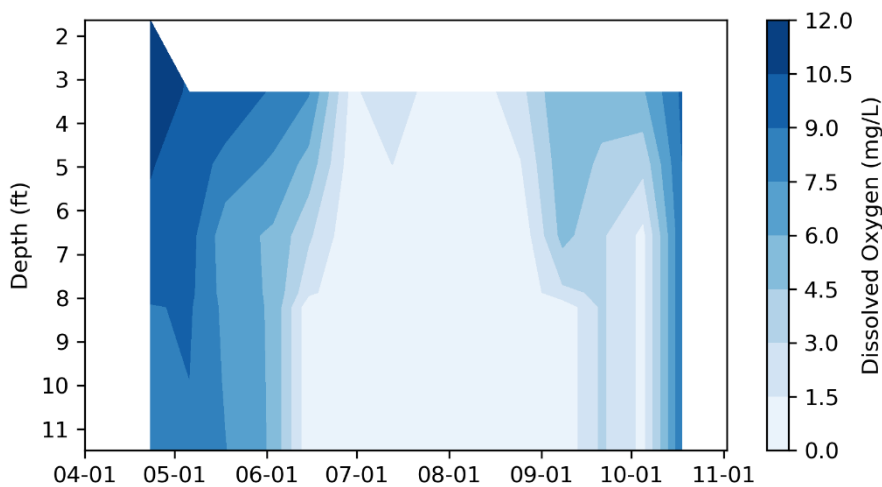
2021 Lake Levels

Lake levels ranged over a total of 1.2 feet; between a minimum of 895.05 feet on August 25, 2021 and a maximum of 896.25 feet on April 23, 2021.



2021 Temperature Profiles

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



2021 Dissolved Oxygen Profiles

The lightest blue 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 from early June until mid-September.