

SHIELDS LAKE

Fast Facts:

DNR Lake ID: 82-0162-00

County: Washington

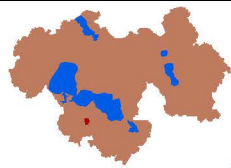
Surface Area: 30 acres

Littoral Area (depths less than 15 feet): 22 acres

Maximum Depth: 27 feet

Shore Length: 0.85 miles

Date: 4/17/2020 Time: 12:02:14 PM Author: E.Lensen
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**Shields Lake
Lake Depths**



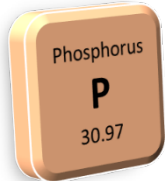
SHIELDS LAKE

2020 Surface Water Quality Summary

Nutrients:

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

54 $\mu\text{g/L}$



Algae:

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

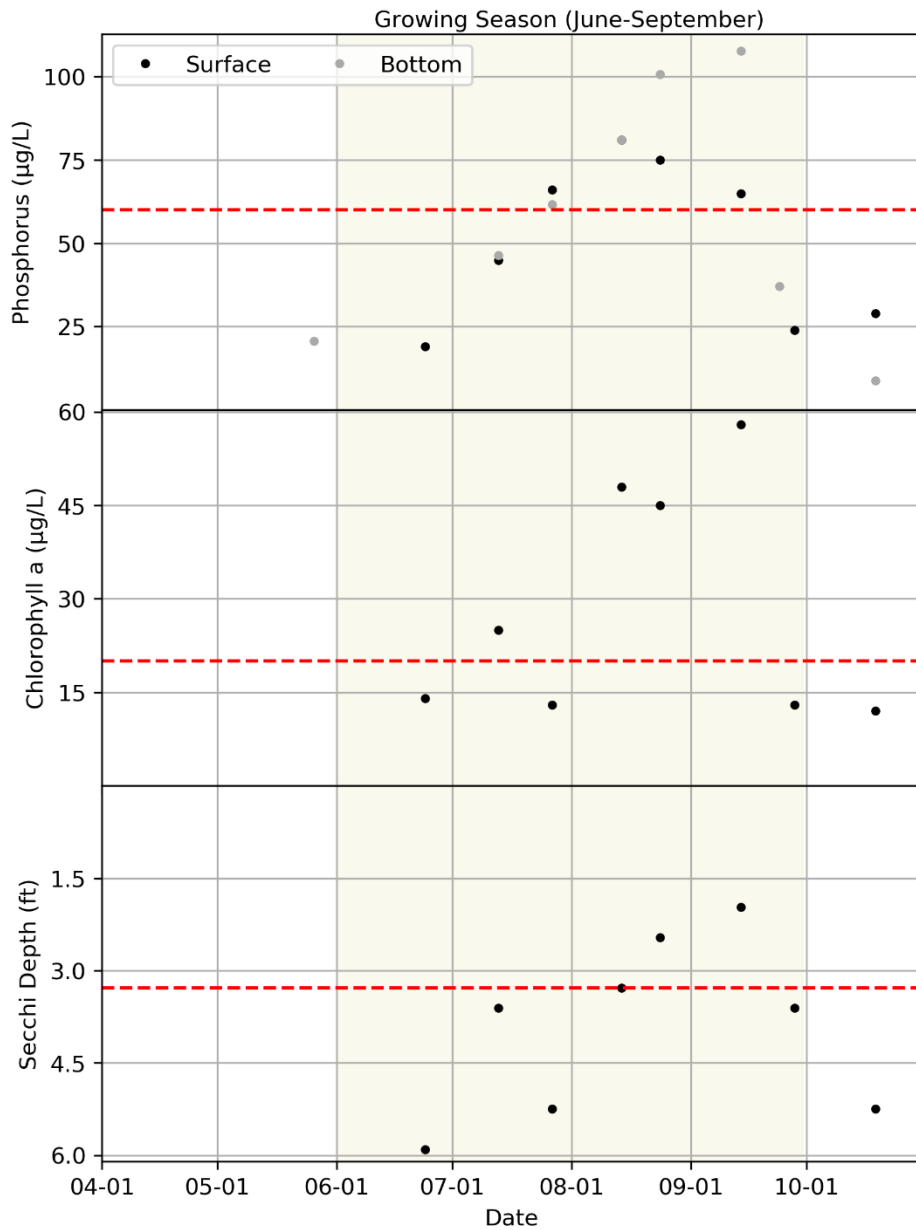
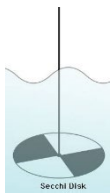
31 $\mu\text{g/L}$



Clarity:

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

3.7 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.

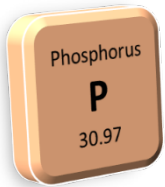
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Historical Water Quality Summary

	Phosphorus ($\mu\text{g/L}$)	Chl-a ($\mu\text{g/L}$)	Secchi (feet)
State Standard	< 60	< 20	> 3.3
10-year Average (2011-2020)	194	47	2.9
2040 District Goal	< 60	n/a	> 4.3
5-year Average (2016-2020)	153	54	2.6

Nutrients:

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



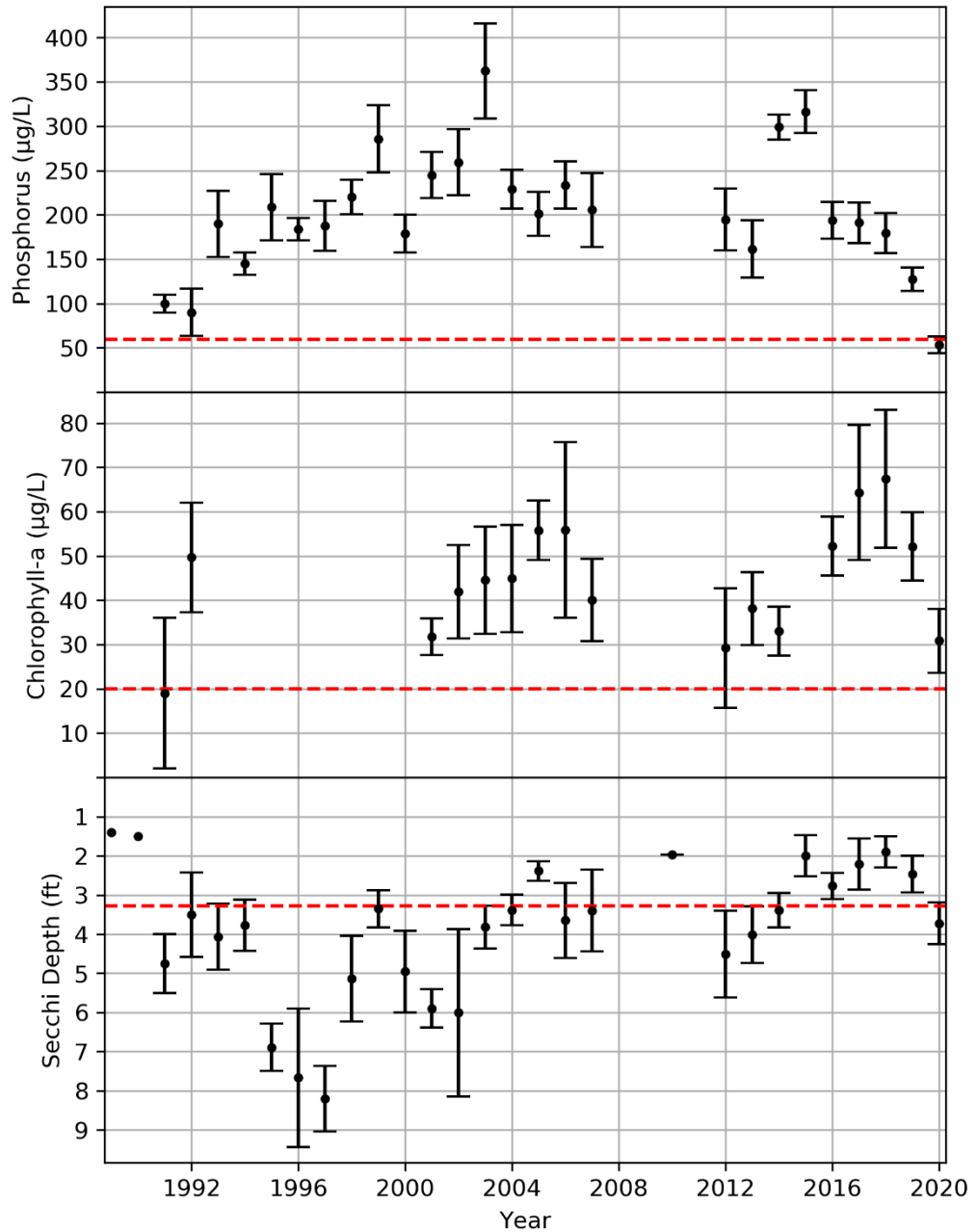
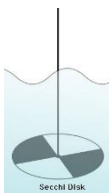
Algae:

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



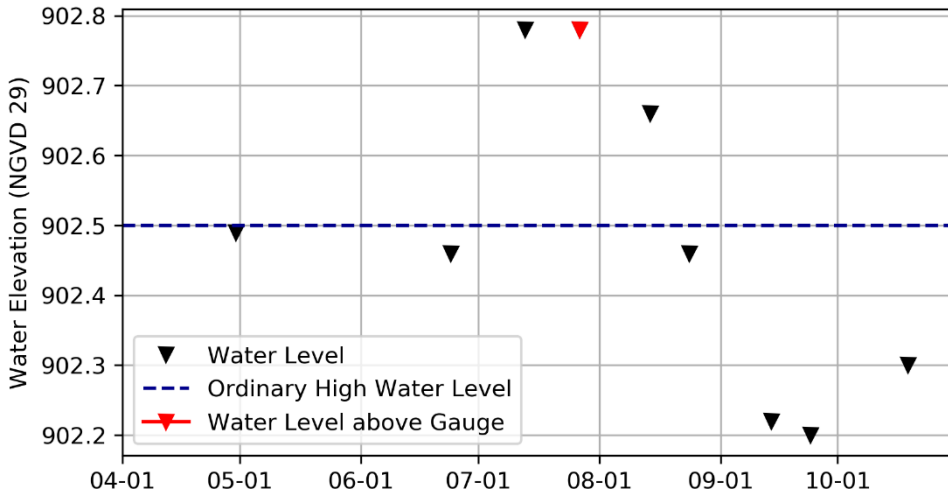
Clarity:

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



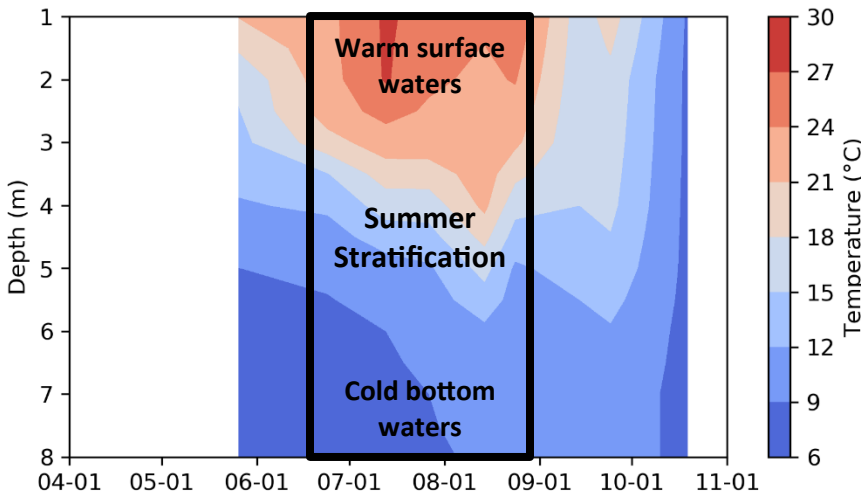
State standard are shown with a dashed red line: Phosphorus = 60 $\mu\text{g/L}$, Chlorophyll-a = 20 $\mu\text{g/L}$, Secchi Depth = 3.3 feet. Growing season averages are shown as black points. Points above the line are worse than the State standard. Points below the line are better than the State standard.

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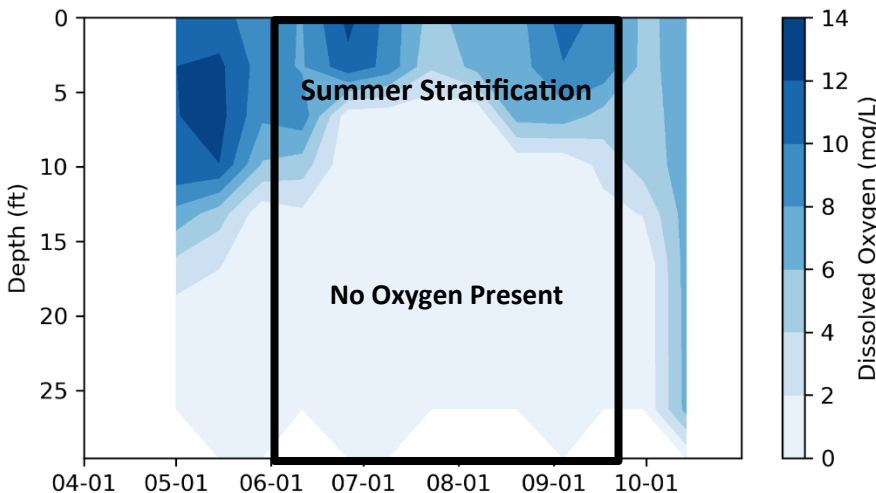
2020 Lake Levels

Lake levels ranged over a total of 0.58 feet; between a minimum of 902.2 feet on September 24, 2020 and a maximum of 902.78 feet on July 13 and 27, 2020. In July, the water level was above the gauge.



2020 Temperature Profiles

The lake was stratified from mid-June until September.



2020 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, but bottom P concentrations remained low.