

# SHIELDS LAKE

## **Fast Facts:**

**DNR Lake ID:** 82-0162-00

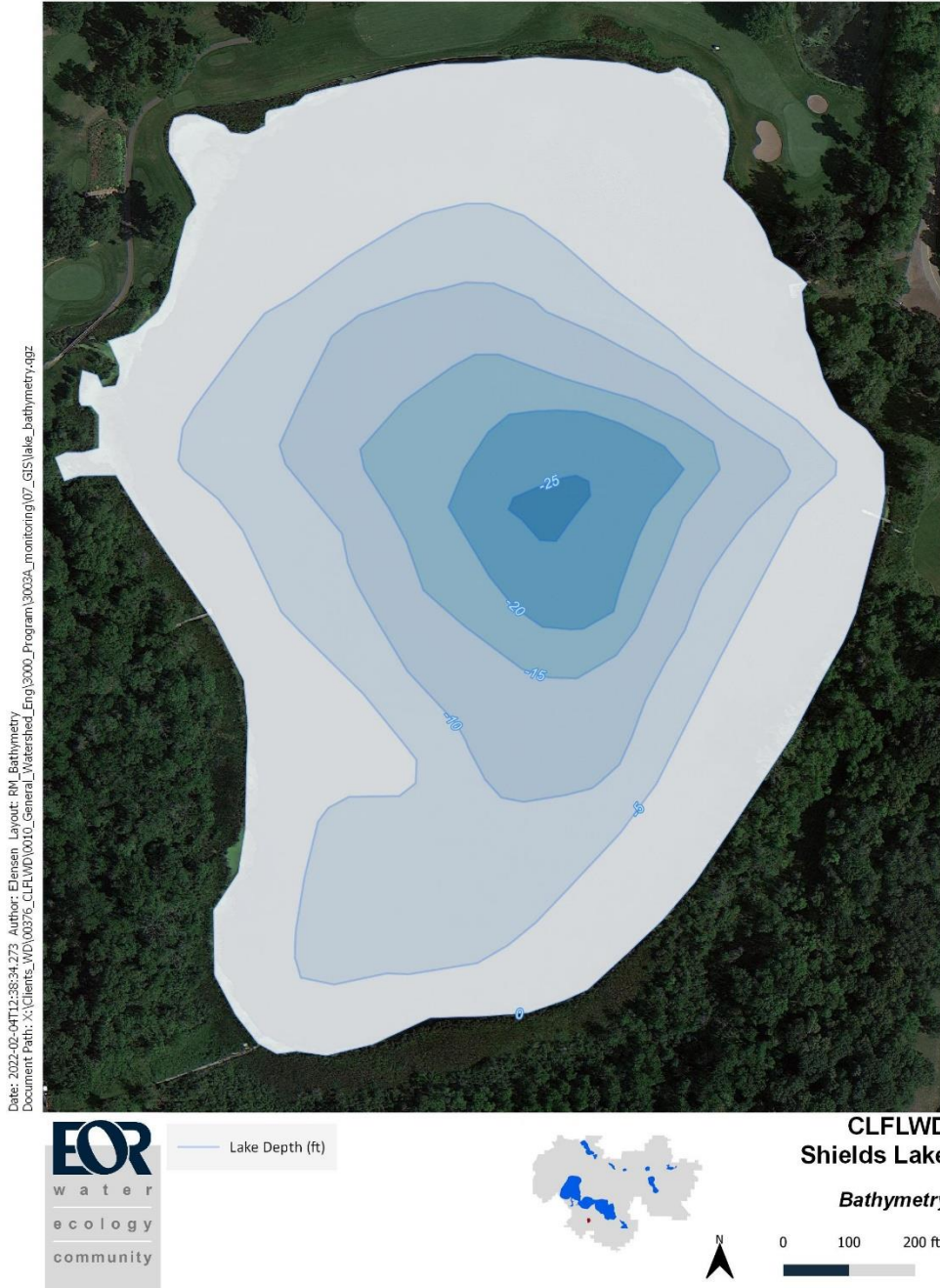
**County:** Washington

**Surface Area:** 30 acres

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

**Maximum Depth:** 27 feet

**Shore Length:** 0.85 miles



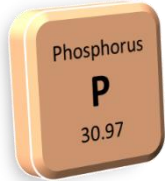
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## 2021 Surface Water Quality Summary

### Nutrients:

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

**38.2  $\mu\text{g/L}$**



### Algae:

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

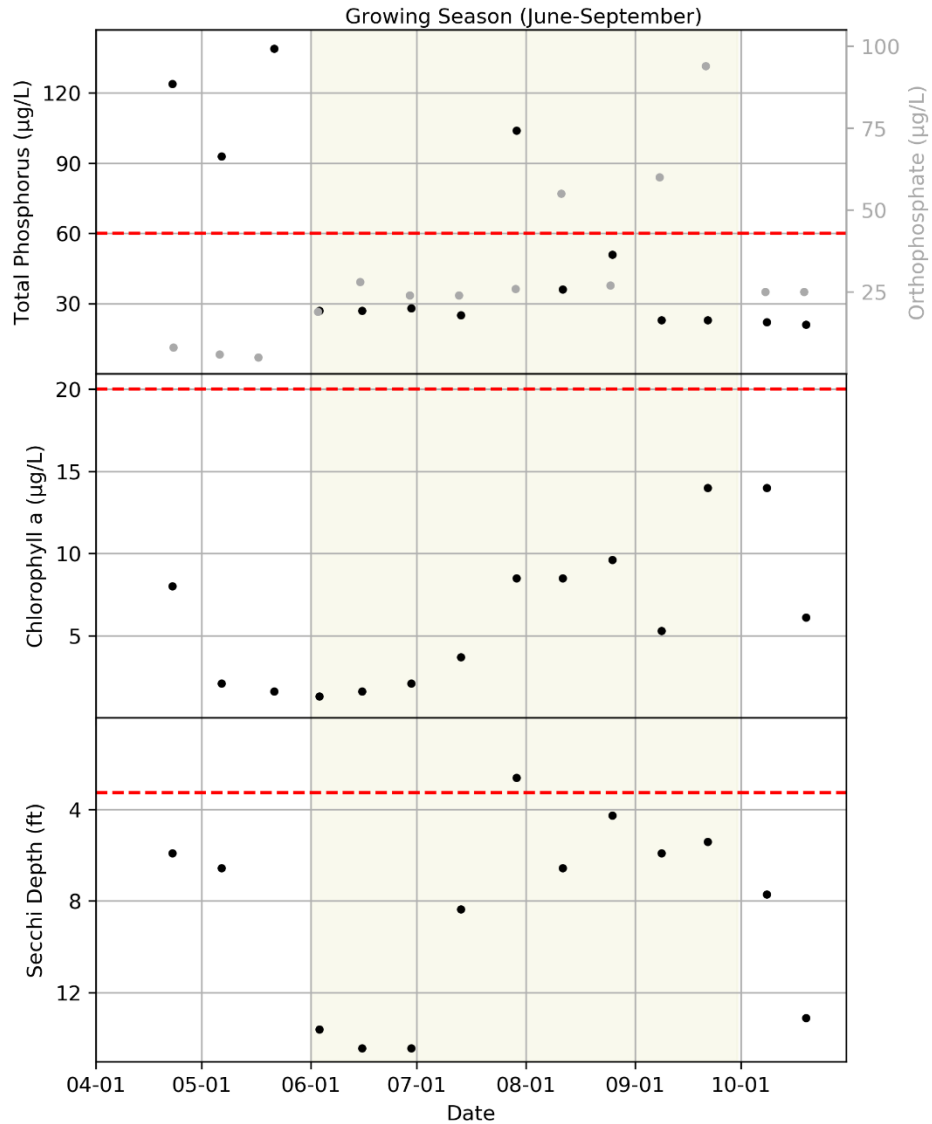
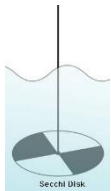
**6.1  $\mu\text{g/L}$**



### Clarity:

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

**8.4 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.

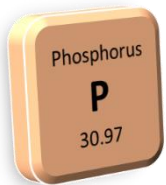
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## Historical Water Quality Summary

	Phosphorus ( $\mu\text{g/L}$ )	Chl-a ( $\mu\text{g/L}$ )	Secchi (feet)
<b>State Standard</b>	< 60	< 20	> 3.3
<b>10-year Average (2012-2021)</b>	<b>177.3</b>	<b>44.8</b>	<b>3.5</b>
<b>2040 District Goal</b>	< 60	n/a	> 4.3
<b>5-year Average (2017-2021)</b>	<b>119.6</b>	<b>44.2</b>	<b>3.8</b>

### Nutrients:

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



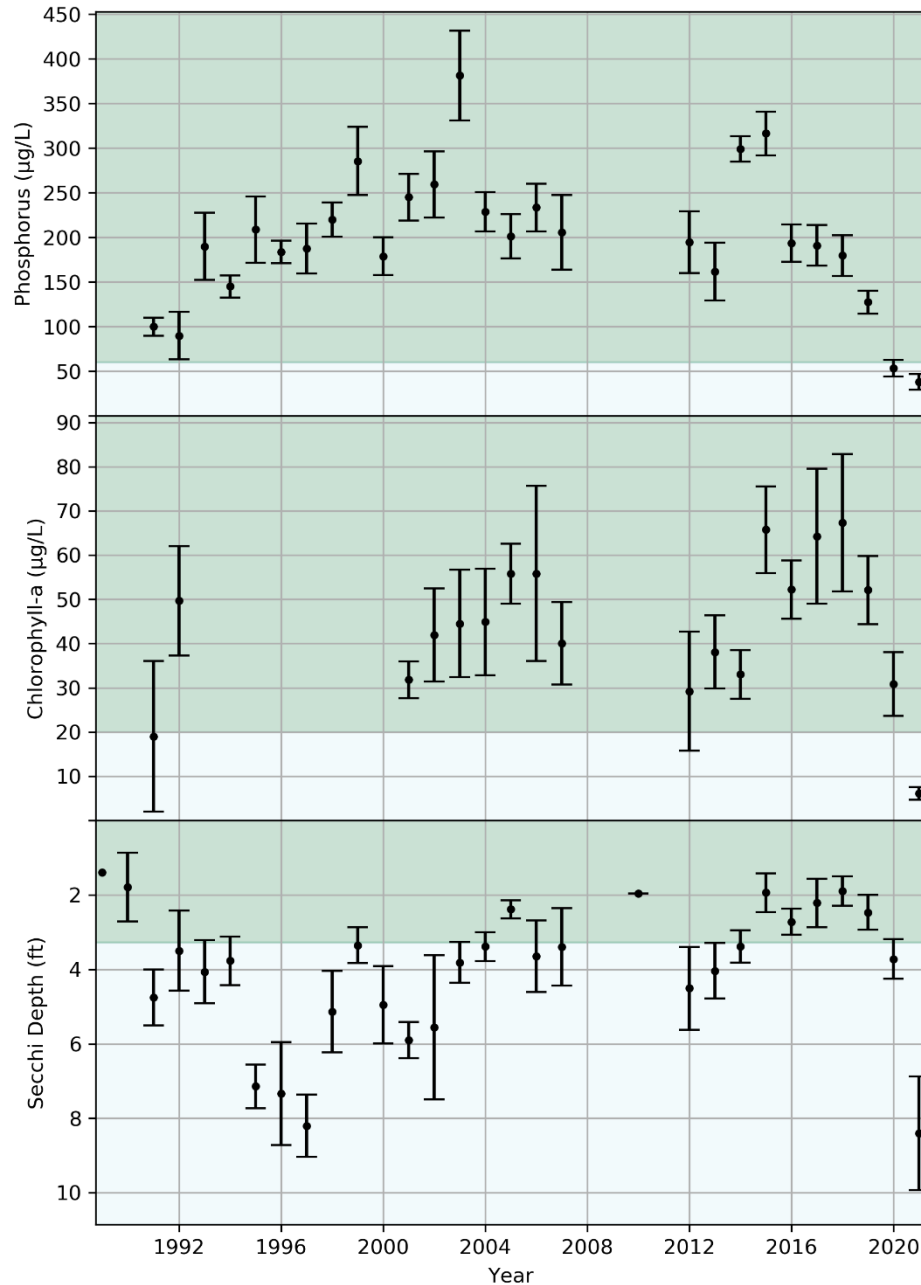
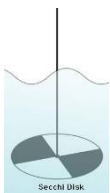
### Algae:

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



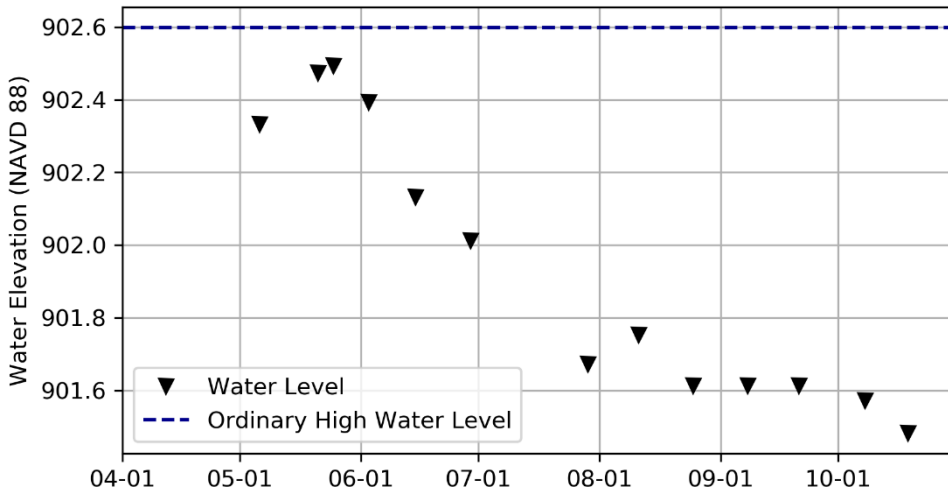
### Clarity:

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



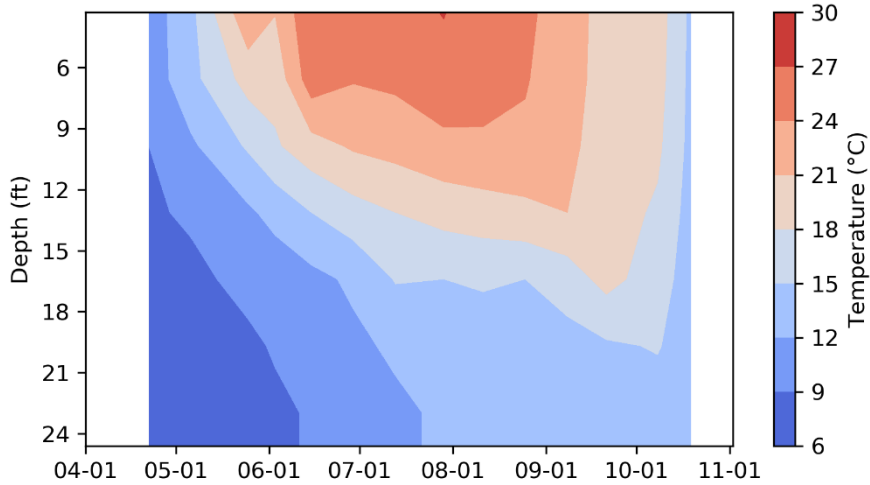
State standard are shown as the boundary between green and light blue. (Phosphorus = 60  $\mu\text{g/L}$ , Chlorophyll-a = 20  $\mu\text{g/L}$ , Secchi Depth = 3.3 feet. Growing season averages are shown as black points. Points in the green area are above the state standard. Points in the light blue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

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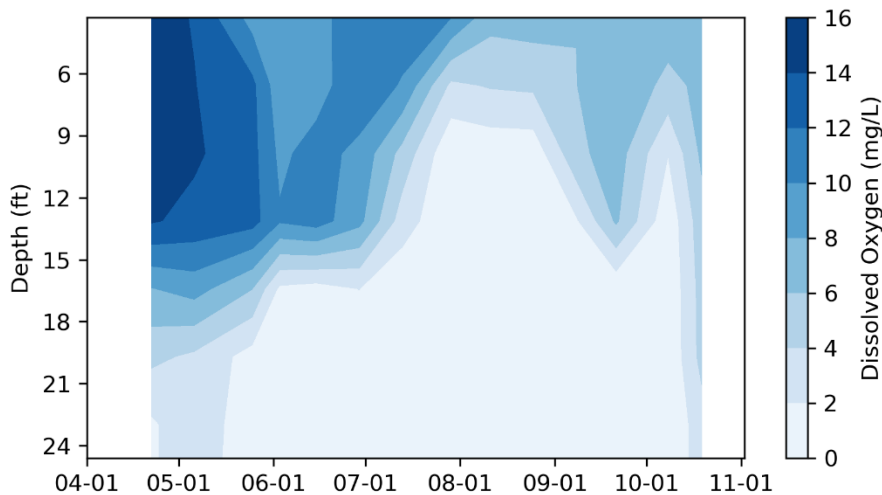
## 2021 Lake Levels

Lake levels ranged over a total of 1.01 feet; between a minimum of 901.48 feet on October 19, 2021 and a maximum of 902.49 feet on May 5, 2021.



## 2021 Temperature Profiles

The lake was stratified from mid-May through 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 throughout the growing season, but bottom P concentrations remained low.