

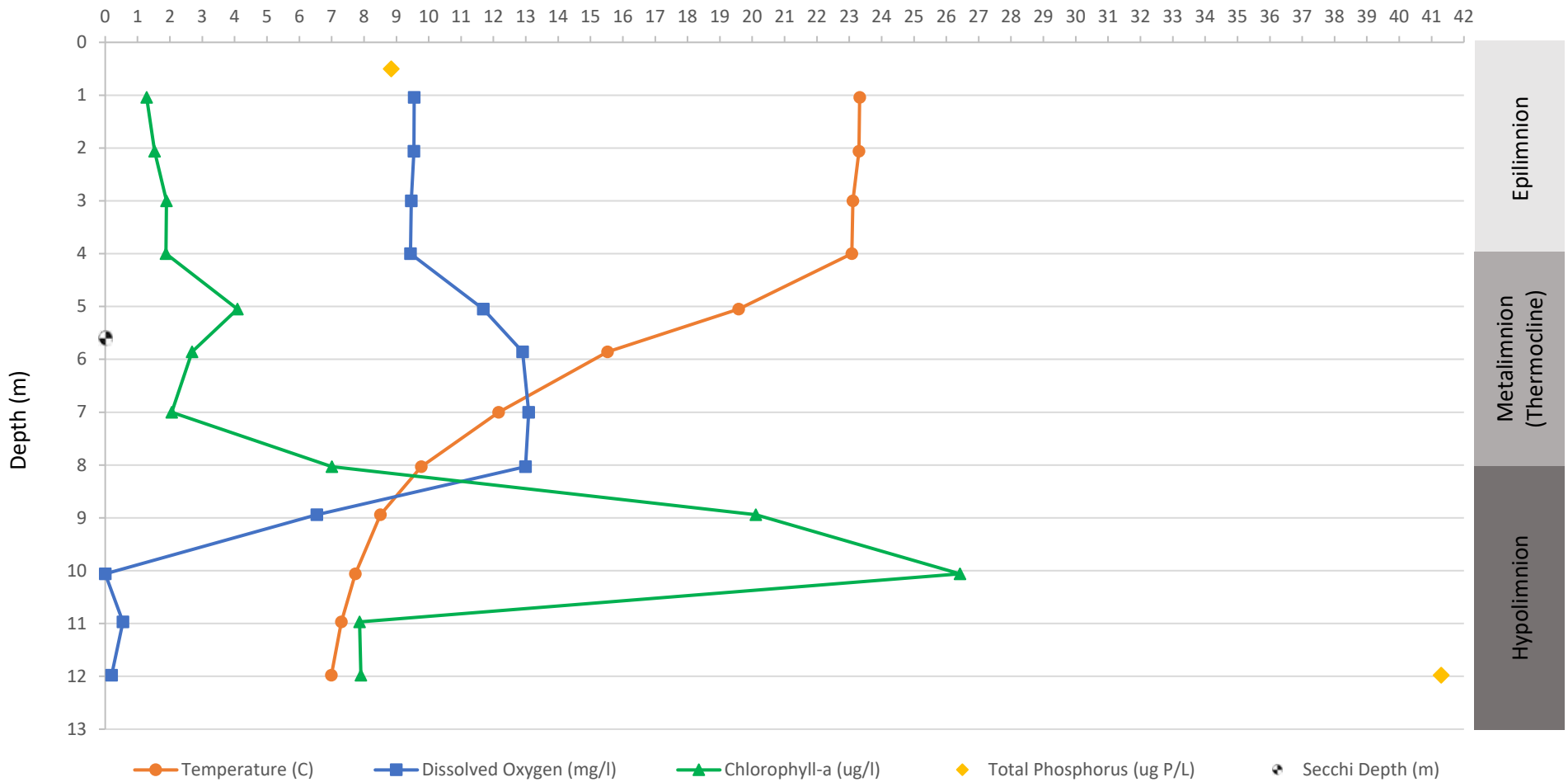
**Fern Lake Station 1**

Cond=Conductivity(uS/cm) DO=Dissolved Oxygen(mg/L) Chl-a=Chlorophyll-a(ug/L) TP=Total Phosphorus(ug P/L) TN=Total Nitrogen(mg/L)  
 Al=Aluminum(ug/L) Ca=Calcium(mg/L) Cl=Chloride(mg/L) DIC=Dissolved Inorganic Carbon(mg/L) DOC=Dissolved Organic Carbon(mg/L)  
 Fe=Iron(ug/L) Mg=Magnesium(mg/L) Mn=Manganese(ug/L) K=Potassium(mg/L) Na=Sodium(mg/L) TCH=Total Calculated Hardness(mg CaCO3/L)

| Date    | Depth(m) | Temp(C) | pH  | Cond  | DO%   | DO   | Chl-a | TP*  | TN* | Al  | Ca   | Cl   | DIC  | DOC | Fe*   | Mg  | Mn*   | K   | Na   | TCH  |
|---------|----------|---------|-----|-------|-------|------|-------|------|-----|-----|------|------|------|-----|-------|-----|-------|-----|------|------|
| 6/21/18 | 0.5      |         |     |       |       |      |       | 8.8  | 0.4 | <20 | 13.6 | 16.3 | 12.2 | 5.2 | <50   | 6.7 | 20.0  | 0.6 | 10.1 | 61.6 |
| 6/21/18 | 1.0      | 23.3    | 8.1 | 166.0 | 111.2 | 9.6  | 1.3   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 2.1      | 23.3    | 8.2 | 166.0 | 111.1 | 9.5  | 1.5   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 3.0      | 23.1    | 8.2 | 165.9 | 109.8 | 9.5  | 1.9   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 4.0      | 23.1    | 8.2 | 165.9 | 109.5 | 9.4  | 1.9   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 5.1      | 19.6    | 8.1 | 159.8 | 126.6 | 11.7 | 4.1   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 5.9      | 15.5    | 7.8 | 162.4 | 128.5 | 12.9 | 2.7   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 7.0      | 12.2    | 7.6 | 158.0 | 121.1 | 13.1 | 2.1   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 8.0      | 9.8     | 7.5 | 165.0 | 113.7 | 13.0 | 7.0   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 8.9      | 8.5     | 7.2 | 181.1 | 55.6  | 6.5  | 20.1  |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 10.1     | 7.7     | 7.1 | 195.1 | 0.0   | 0.0  | 26.4  |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 11.0     | 7.3     | 7.0 | 200.6 | 4.5   | 0.6  | 7.9   |      |     |     |      |      |      |     |       |     |       |     |      |      |
| 6/21/18 | 12.0     | 7.0     | 7.0 | 209.6 | 1.6   | 0.2  | 7.9   | 41.3 | 0.8 | <20 | 14.8 | 22.2 | 14.8 | 5.0 | 192.7 | 7.3 | 166.7 | 0.7 | 13.4 | 66.9 |

\*Large increase in concentration from surface (0.5 m) to bottom (1 m above sediment) water indicates internal loading from sediments under anoxic conditions.

Fern Lake Station 1 Temperature, Dissolved Oxygen, Chlorophyll-a and Total Phosphorus Vertical Profiles on 6/21/2018



Anoxia in the hypolimnion and large increase in phosphorus concentration from surface (0.5 m) to bottom (1 m above sediment) water indicates internal loading from sediments. Note the chlorophyll-a (algae/cyanobacteria) maximum in the hypolimnion.