

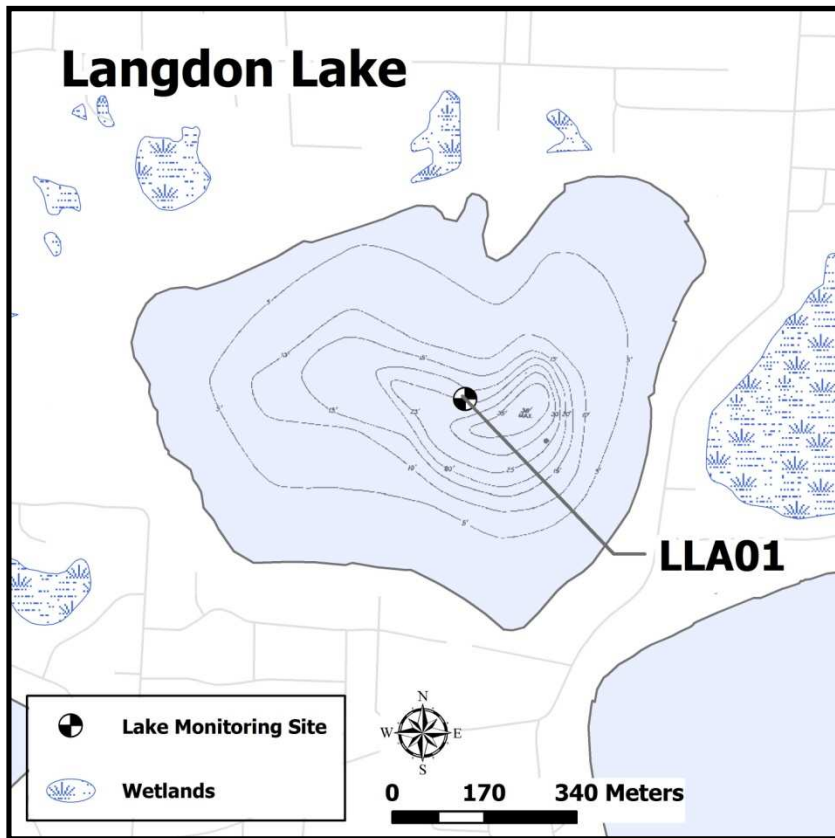
## Langdon Lake (DNR ID 27-0182-00)

MCWD Site ID: LLA01

Sample Location GPS Coordinates: 44.933N, -93.674W

Surface Area (acres): 144

Max. Depth (ft): 38



**Figure 7.2 Langdon Lake**

### Directions

Langdon Lake is located in the city of Mound off Hwy 110. There is currently no public access to the lake.

### Site Information

Langdon Lake is a dimictic class 2B lake protected for aquatic life and recreation. Limited water quality information is available beginning in 1976, but regular seasonal sampling did not begin until 1997. It is currently listed as an impaired water body by the MPCA for mercury in fish tissues. MCWD staff have been monitoring the lake on a bi-weekly basis from the time of ice out (April) to the time of fall mixing (mid-October) since 2006. A YSI multi-probe meter was used to measure dissolved oxygen (DO), temperature (°C), pH, and specific conductivity

( $\mu\text{S}/\text{cm}$ ) from the water surface and at each meter depth to the bottom. Water samples were also collected at 1 meter below the water surface as well as one meter from the bottom. Surface sample parameters analyzed included total phosphorus (TP), total nitrogen (TN), and soluble reduced phosphorus (SRP). Surface concentrations of chlorophyll-*a* were also analyzed and measurements of Secchi disc depth were recorded. Bottom samples were analyzed for total phosphorus (TP) as well as soluble reduced phosphorus (SRP).

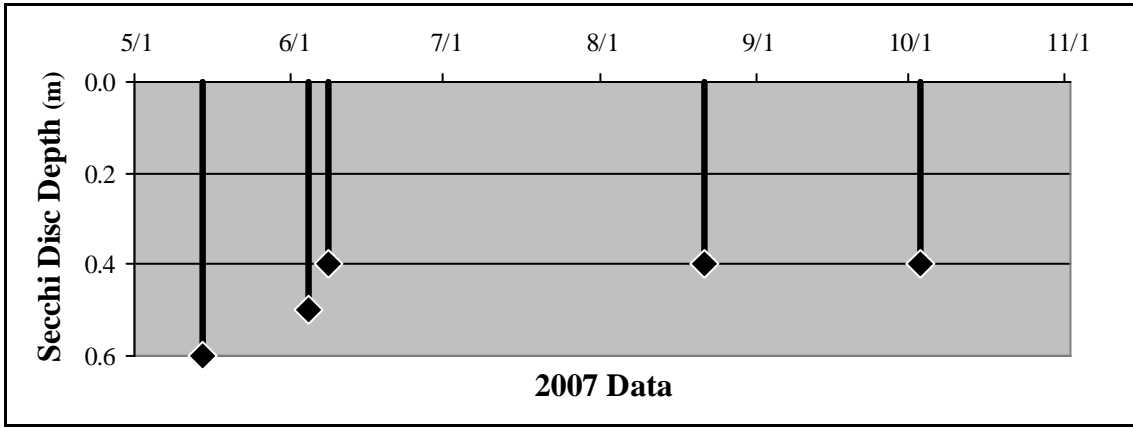
### 2007 Data Summary

- Secchi disc depth was under the standard (1.2 m) for the entire season.
- Chlorophyll-*a* concentrations were over the standard (15 ppb) in all samples increasing from initial concentrations to 10 times the standard by late August before declining slightly.
- TP concentrations increased throughout the season and were well over the standard (40 ppb) for all samples.

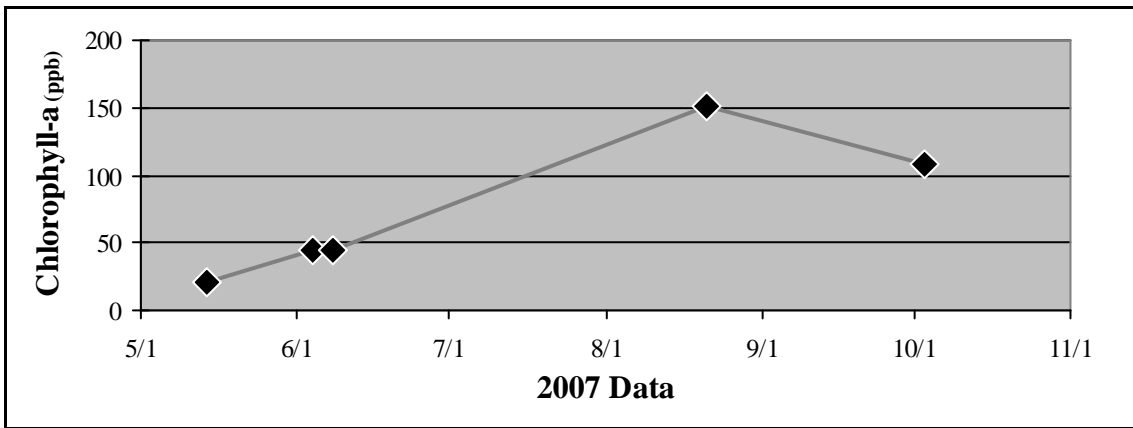
**Table 7.1 Langdon Lake 2007 Summary**

<b>2007 Summer (May-September) Water Quality Summary</b>				
<b>Parameter</b>	<b>Range</b>	<b>Mean</b>	<b>Grade</b>	<b>TSI value *</b>
Secchi Depth (m)	0.4 - 0.6	0.4	F	72
Surface TP ( $\mu\text{g}/\text{L}$ )	105 - 221	167.0	D	78
Chlorophyll- <i>a</i> ( $\mu\text{g}/\text{L}$ )	20.3 - 151	79.9	D	74
		<b>Overall Score</b>	<b>D-</b>	<b>75</b>

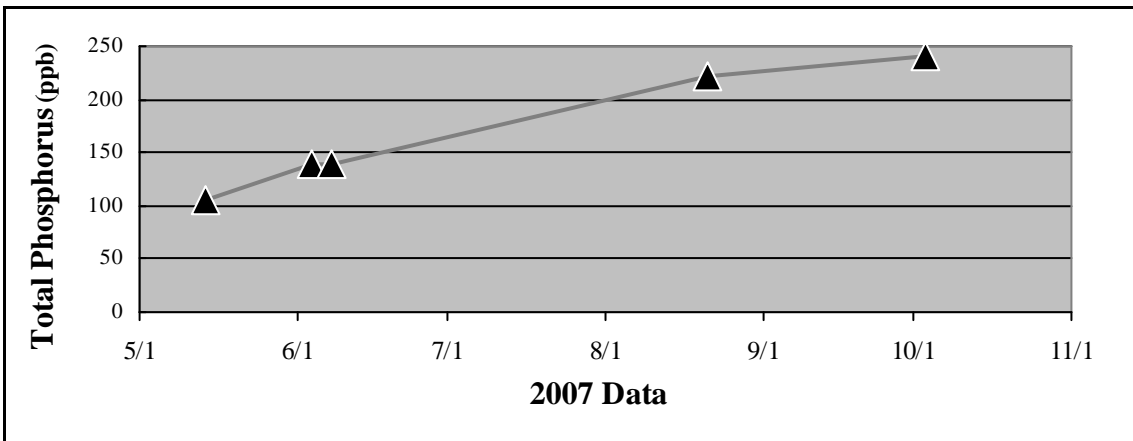
*\*excludes May Data*



a.

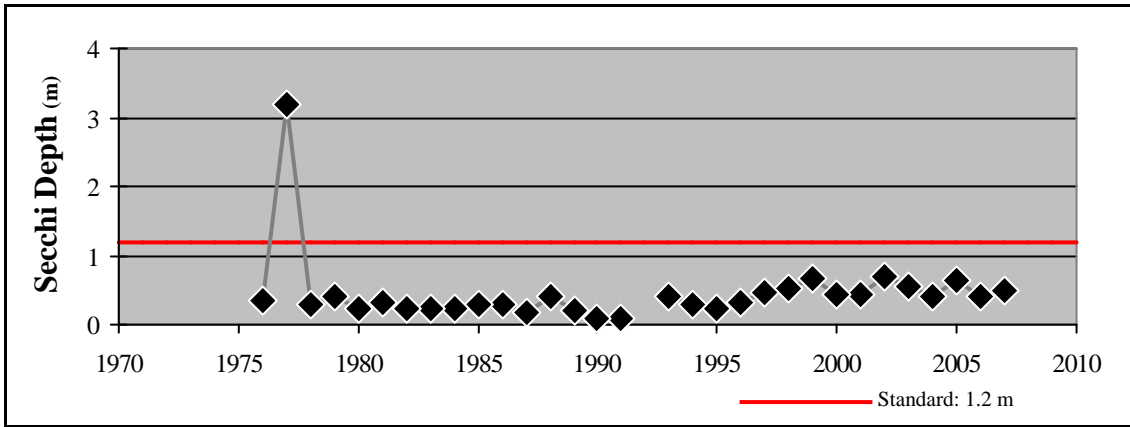


b.

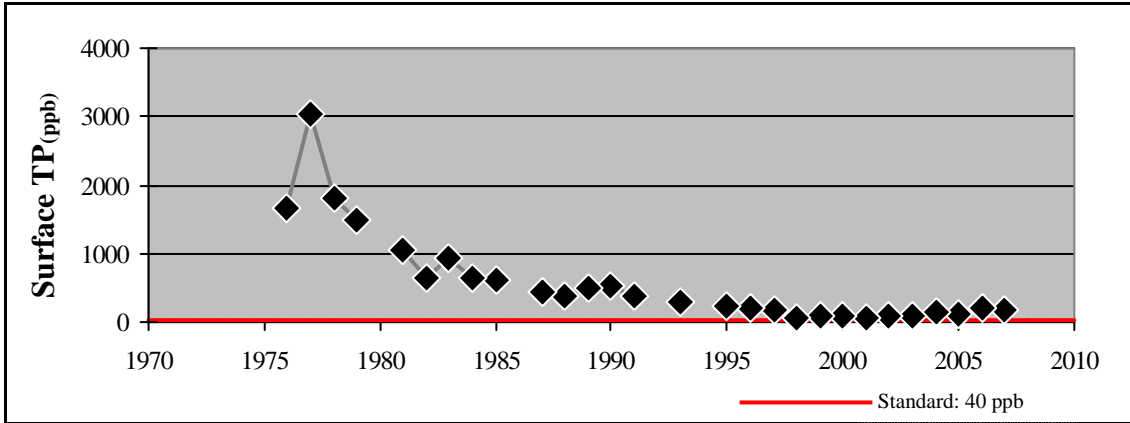


c.

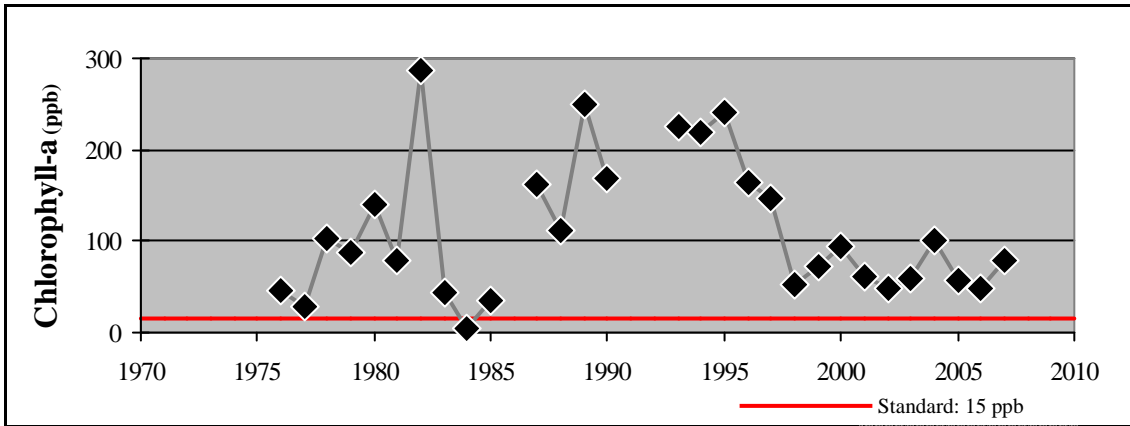
**Figure 7.3 (a-c) Langdon Lake  
2007 Grade: D-**



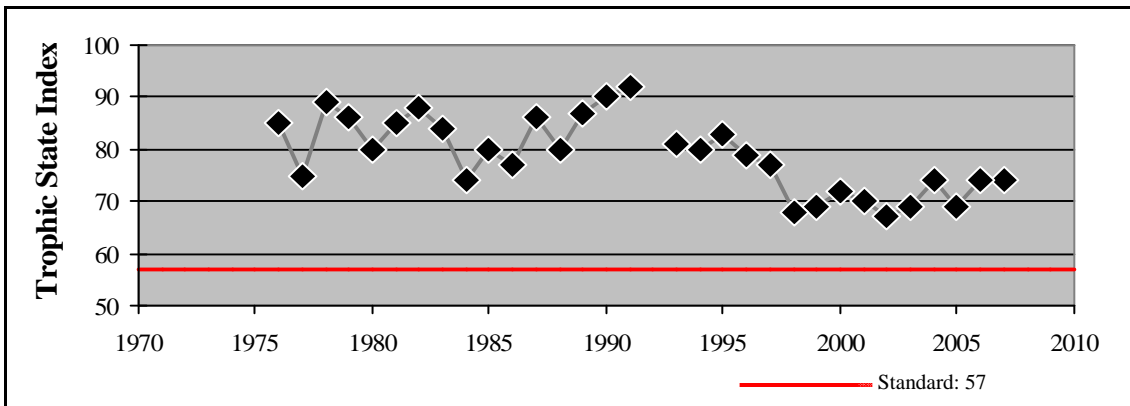
d.



e.



f.



g.

Figure 7.3 (d - g) Langdon Lake - Summer Mean Values