

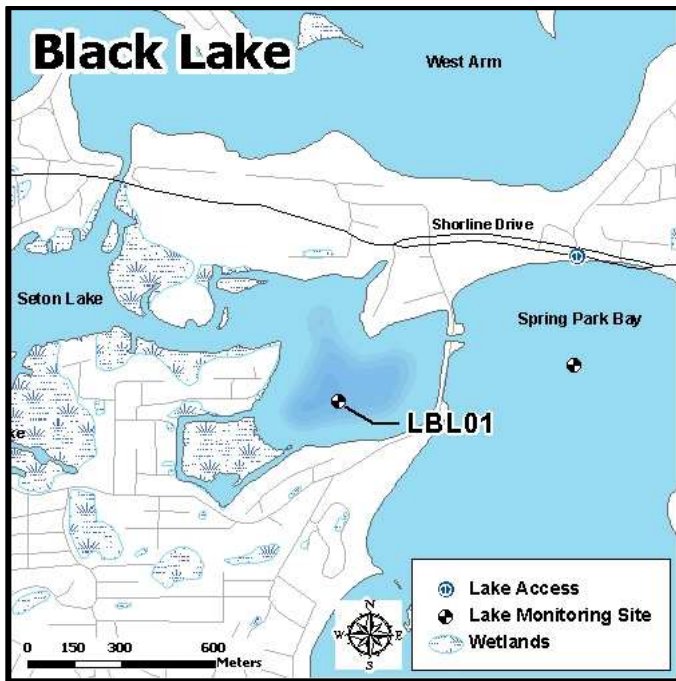
Black Lake (DNR ID 27-0133-06)

MCWD Site ID: LBL01

Sampling Location GPS Coordinates: 44.9305N, -93.6354W

Surface Area (acres): 25

Max. Depth (ft): 25



Site Information

Lake Minnetonka is a class 2B lake protected for aquatic life and recreation. Black Lake is located in Spring Park with adjacent water bodies of Spring Park Bay and Seton Lake. Water quality information for Black Lake is available beginning in 2004. MCWD staff have been monitoring the site 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 ($^{\circ}\text{C}$), pH, and specific conductivity ($\mu\text{S}/\text{cm}$) from the water surface and at each meter depth to the bottom. Water samples were collected at 1 meter below the water surface as well as one meter from the bottom. Surface and bottom sample parameters analyzed included total phosphorus (TP), total dissolved phosphorus (TDP), soluble reduced phosphorus (SRP), total nitrogen (TN), total dissolved nitrogen (TDN), NO_3/NO_2 , and ammonia (NH_4). Chlorophyll-*a* surface concentrations were also analyzed and measurements of Secchi disc depth were recorded.

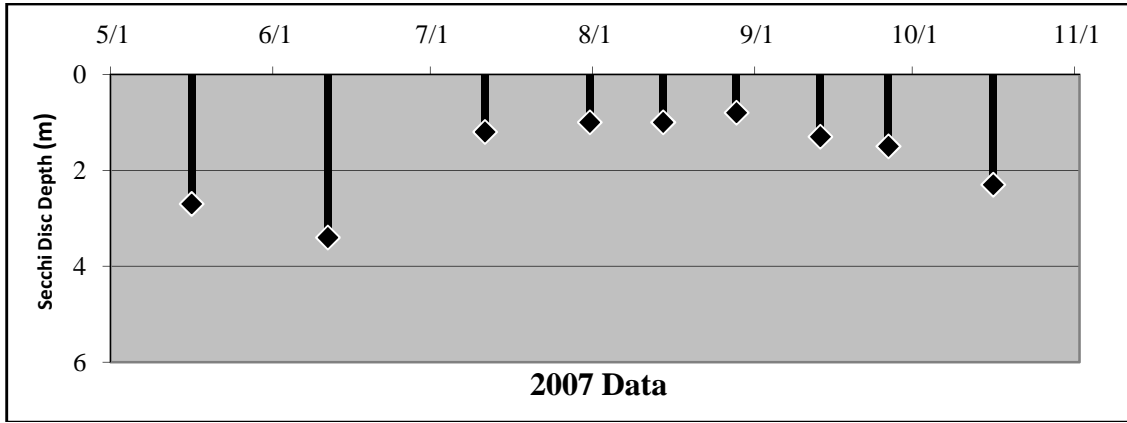
2007 Data Summary

- Secchi Depth falls below the standard (1.2 m) from mid-July throughout August, while readings are above the standard for the remainder of the season.
- Chlorophyll-*a* concentrations began the season low (near zero) and experience an upward trend until September, at which point levels are over twice the standard (15 ppb).
- TP concentrations were well above standard (40 ppb) at the beginning of the season and subsequently experienced a sharp decline below standards at which point a gradual increasing trend was assumed.

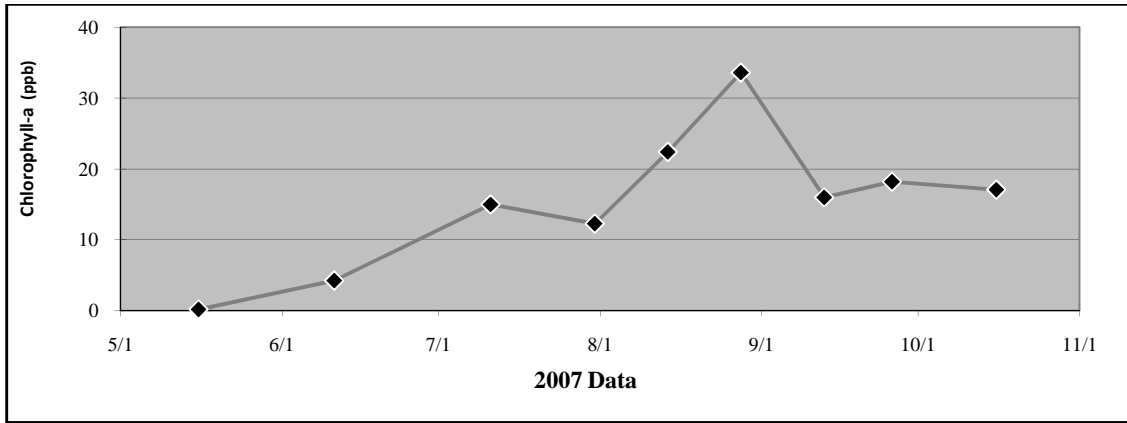
Table 2.1 Black Lake 2007 Summary

2007 Summer (May-September) Water Quality Summary				
Parameter	Range	Mean	Grade	TSI value *
Secchi Depth (m)	0.8 - 3.4	1.5	C	55
Surface TP (µg/L)	31 - 90	39.1	C	57
Chlorophyll- <i>a</i> (µg/L)	<0.2 - 33.6	17.4	B	59
		Overall Score	C+	57

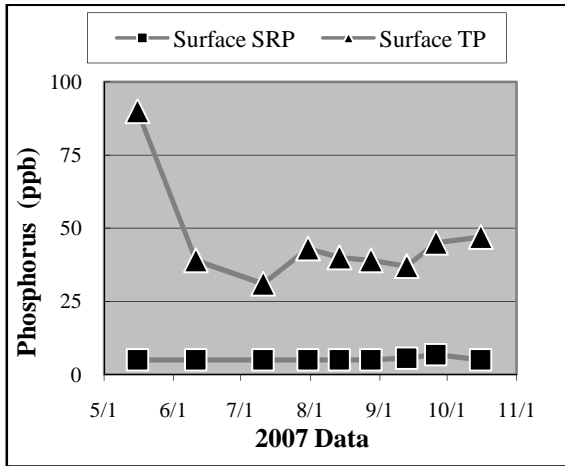
**excludes May Data*



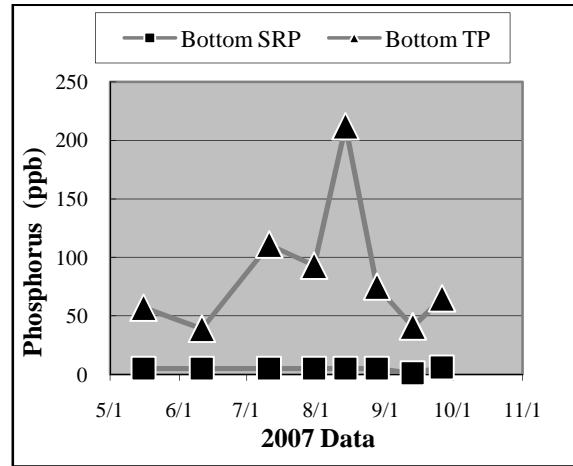
a.



b.

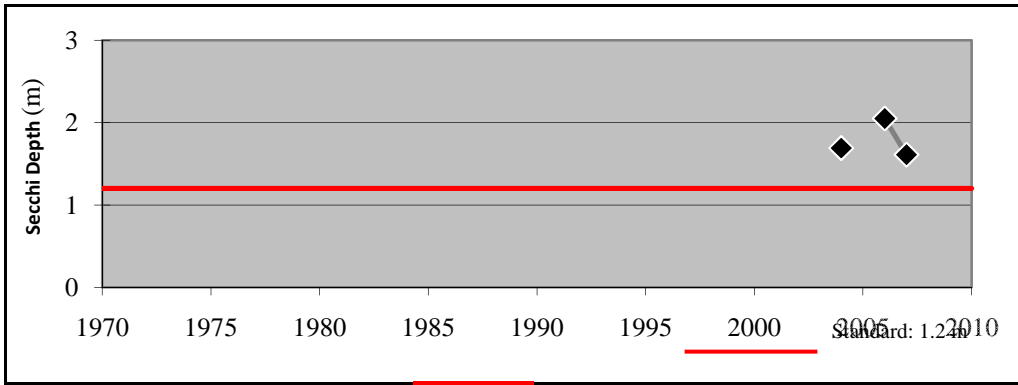


c.

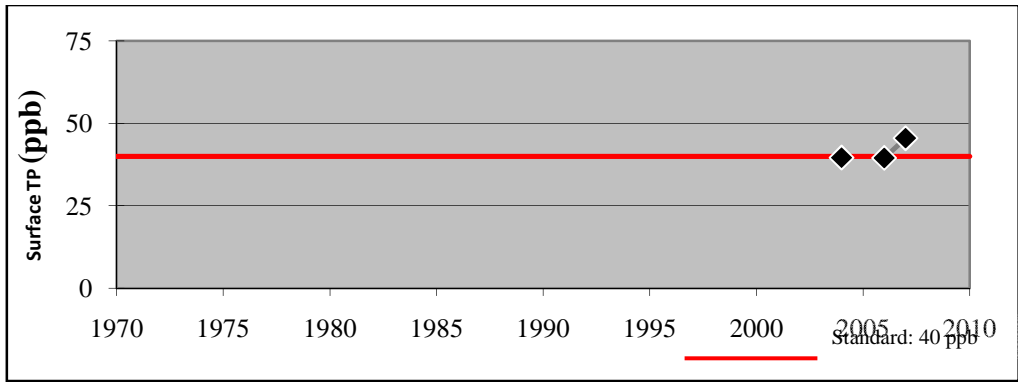


d.

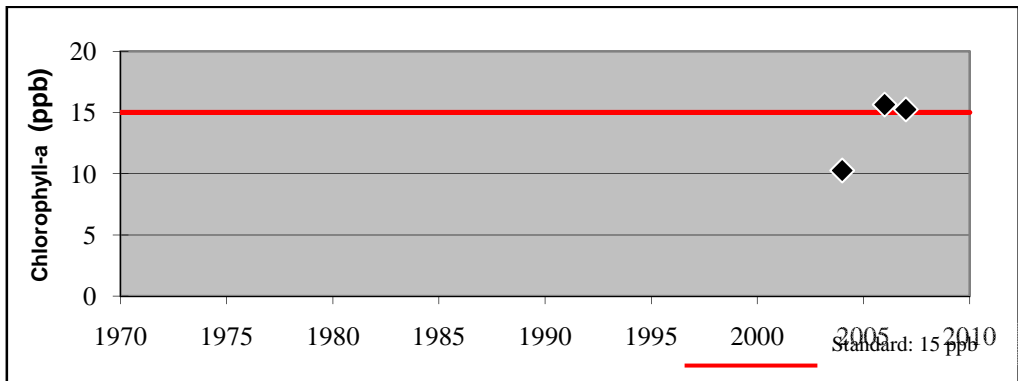
**Figure 2.2 (a-d) Black Lake
2007 Grade: C+**



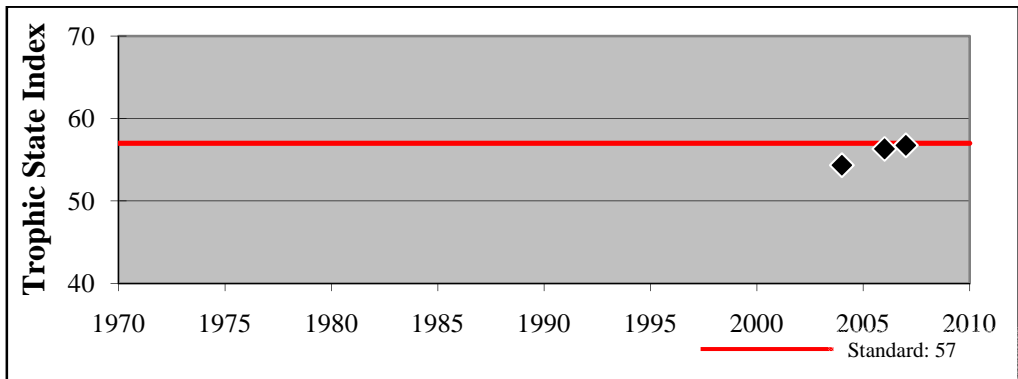
e.



f.



g.



h.

Figure 2.2 (e - h) Black Lake - Summer Mean Values