

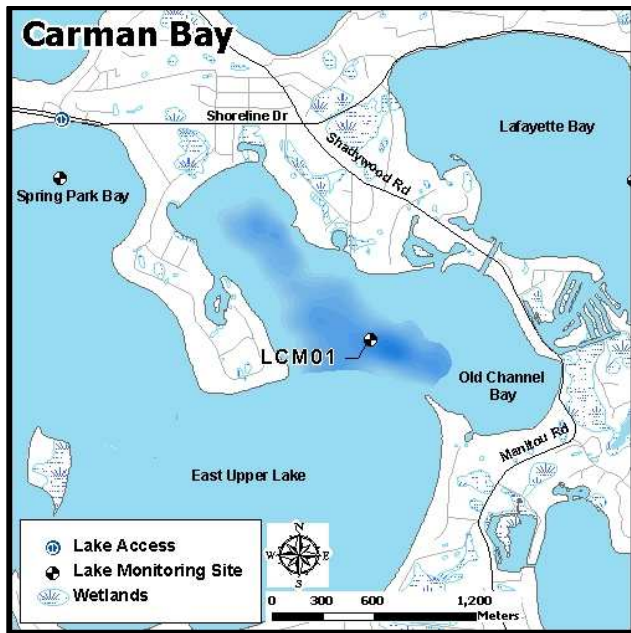
Carman Bay (DNR ID 27-0133-00)

MCWD Site ID: LCM01

Sampling Location GPS Coordinates: 44.92260N, -93.60180W

Surface Area (acres): 307

Max. Depth (ft): 52



Site Information

Lake Minnetonka is a class 2B lake protected for aquatic life and recreation. Carman Bay was initially sampled by Three Rivers Park District in 2004 along with the adjacent site in the East Upper Lake. 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 ($^{\circ}\text{C}$), 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.

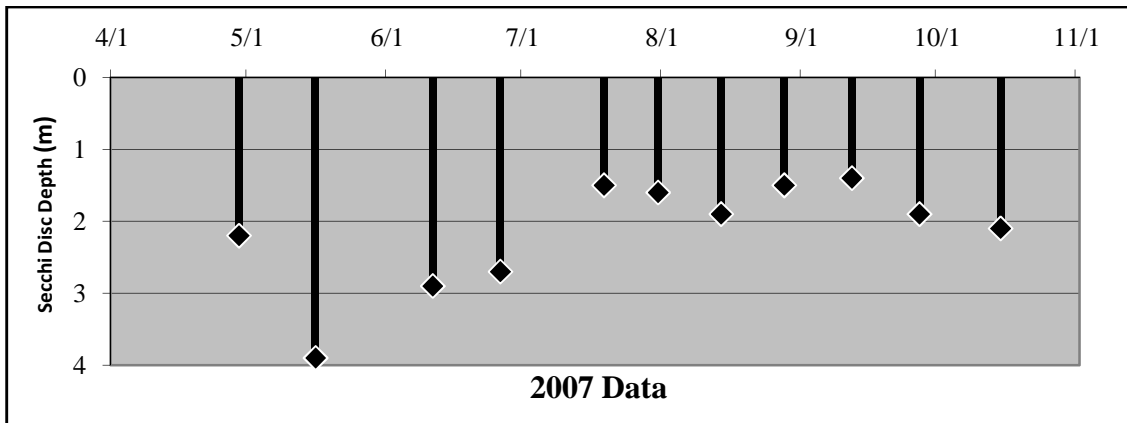
2007 Data Summary

- Secchi Depth remained above the standard (1.2 m) throughout the season, with exceptionally high levels during the months of May and June.
- Chlorophyll-*a* concentrations experienced an upward trend beginning in mid-May with levels exceeding the standard (15 ppb) at the end of the season.
- TP concentrations remained below the standard (40 ppb) for most of the season with the exception of one sample in mid-June.

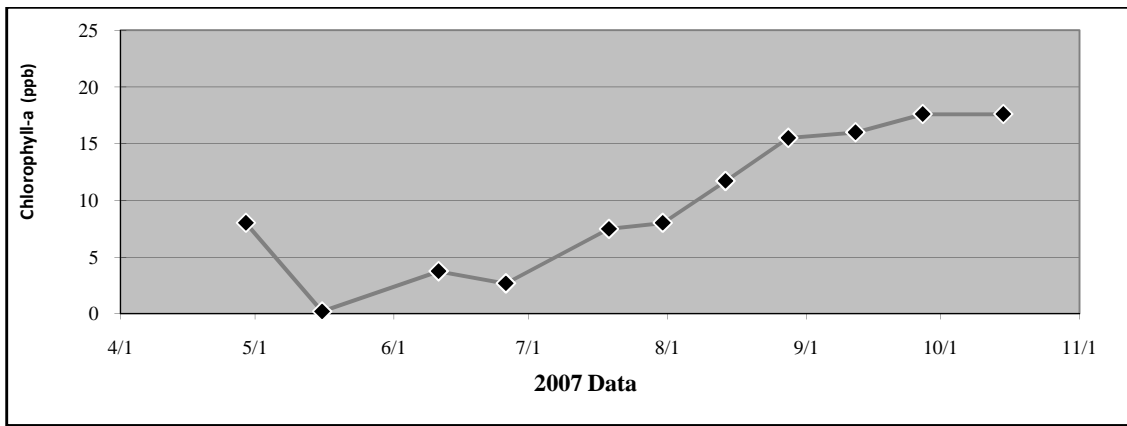
Table 2.2 Carman Bay 2007 Summary

2007 Summer (May-September) Water Quality Summary				
Parameter	Range	Mean	Grade	TSI value *
Secchi Depth (m)	1.4 - 3.9	1.9	C	51
Surface TP ($\mu\text{g/L}$)	10 - 49	27.7	B	52
Chlorophyll- <i>a</i> ($\mu\text{g/L}$)	<0.2 - 17.6	11.3	A	54
		Overall Score	B	52

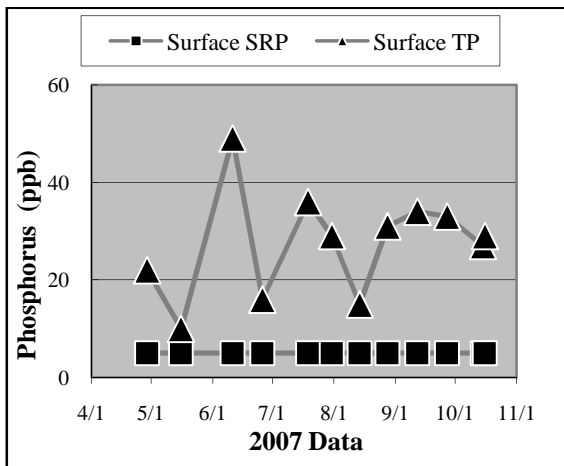
**excludes May data*



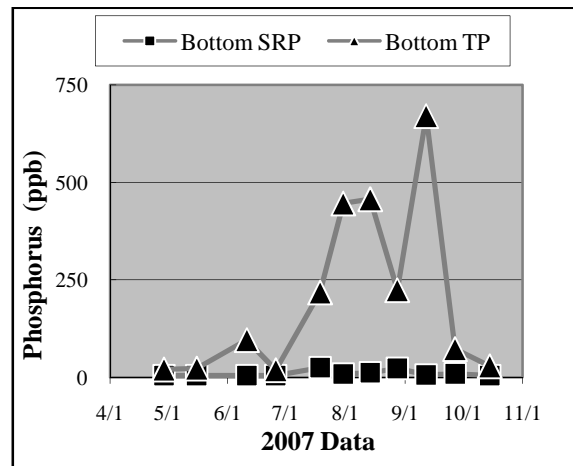
a.



b.

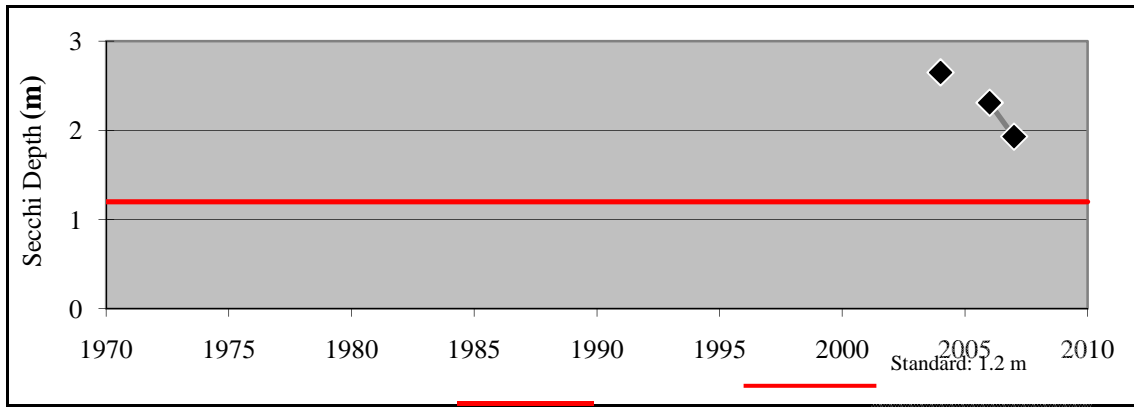


c.

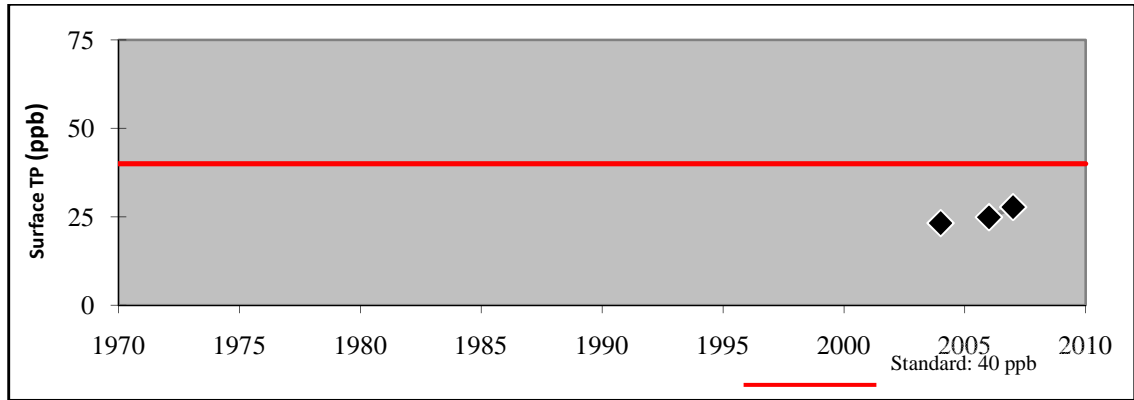


d.

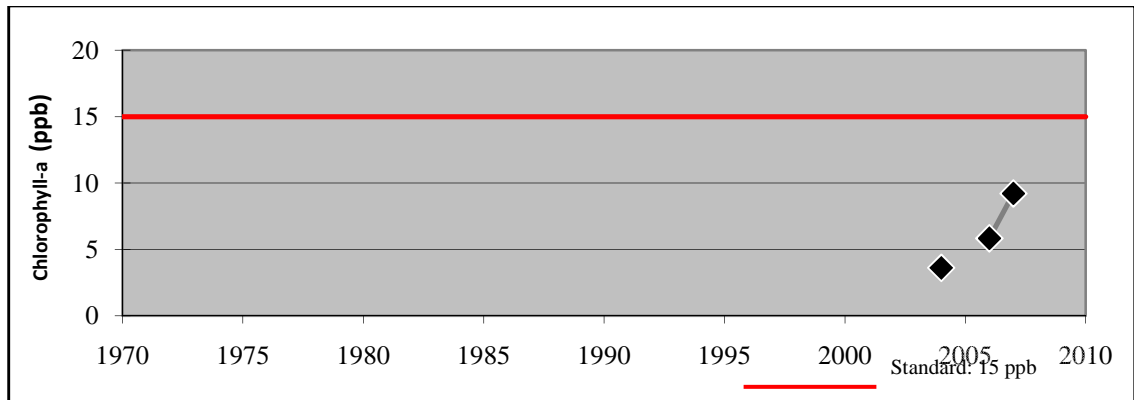
Figure 2.3 (a-d) Carman Bay
2007 Grade: B



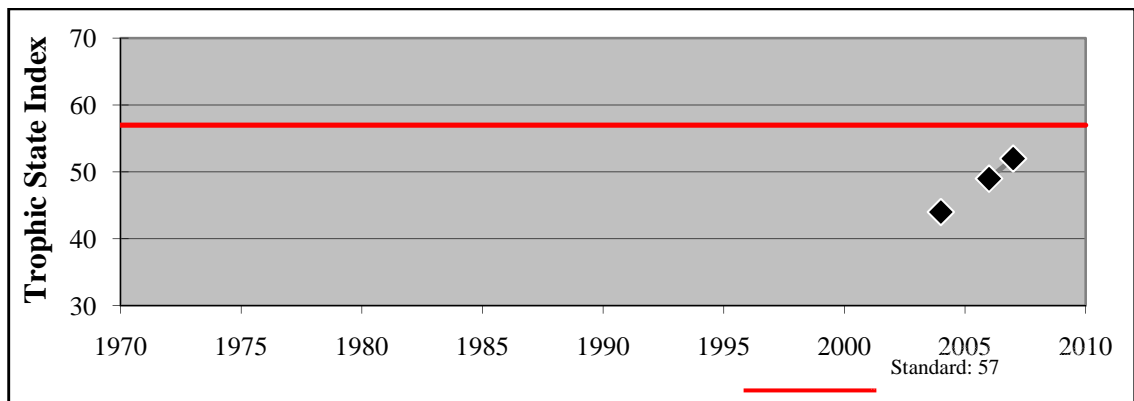
e.



f.



g.



h.

Figure 2.3 (e - h) Carman Bay - Summer Mean Values