

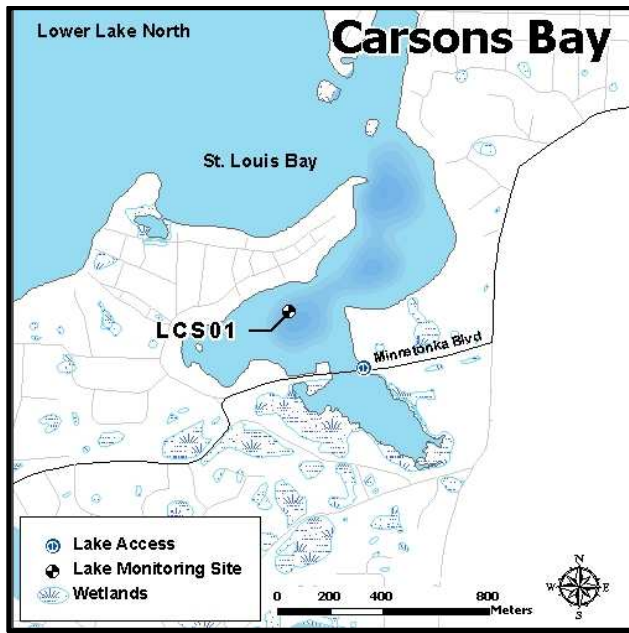
## Carsons Bay (DNR ID 27-0133-03)

MCWD Site ID: LCS01

Sampling Location GPS Coordinates: 44.92590N, -93.53190W

Surface Area (acres): 152

Max. Depth (ft): 23



### Site Information

Lake Minnetonka is a class 2B lake protected for aquatic life and recreation. Carsons Bay is located near the city of Deephaven on Lake Minnetonka. It is located on the southeastern side of Lower Lake North connected to the adjacent St. Louis Bay. Public lake access is available at the Carsons Bay boat access located half a mile west off Minnetonka Blvd from Vine Hill Road in Deephaven. 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),  $\text{NO}_3/\text{NO}_2$ , and ammonia ( $\text{NH}_4$ ). Chlorophyll-*a* surface concentrations were also analyzed and measurements of Secchi disc depth were recorded.

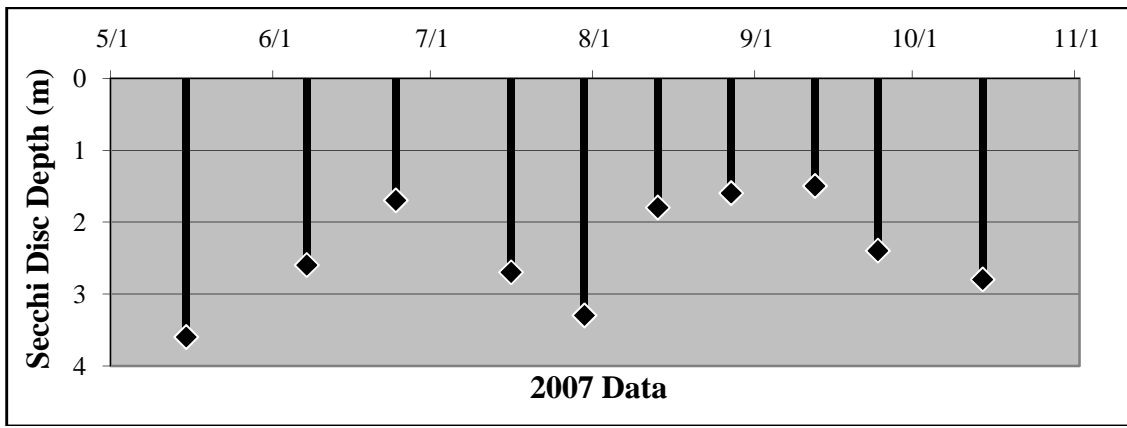
## 2007 Data Summary

- Secchi Depth remained above the standard (1.2 m) throughout the season, gradually decreasing as the season progressed
- Chlorophyll-*a* concentrations increased throughout the season after an initial decrease from the first sample taken in late April. Concentrations surpassed the standard (15 ppb) from late August through 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.

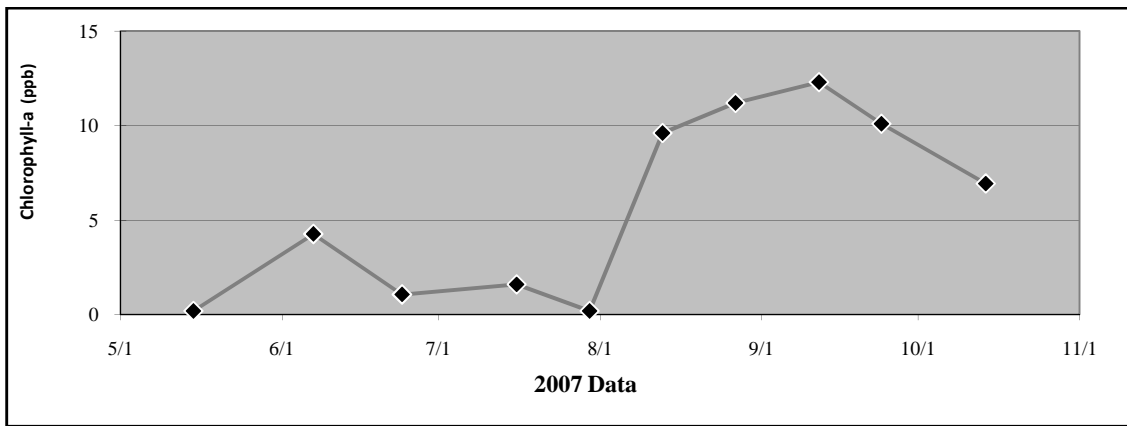
**Table 2.3 Carsons Bay 2007 Summary**

<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)	1.5 - 3.6	2.2	B	48
Surface TP ( $\mu\text{g/L}$ )	11 - 57	29.6	B	53
Chlorophyll- <i>a</i> ( $\mu\text{g/L}$ )	<0.2 - 12.3	6.3	A	48
		<b>Overall Score</b>	<b>B+</b>	<b>49</b>

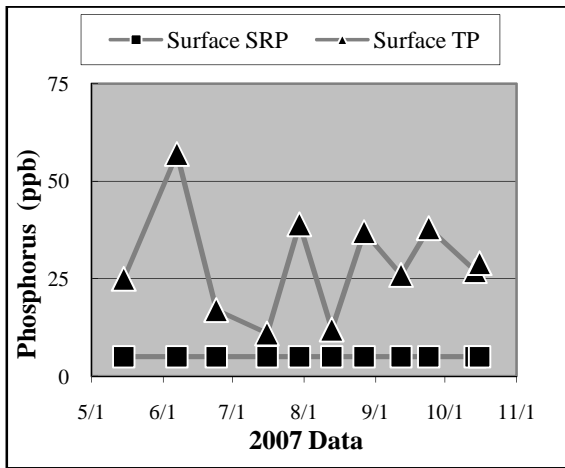
*\*excludes May Data*



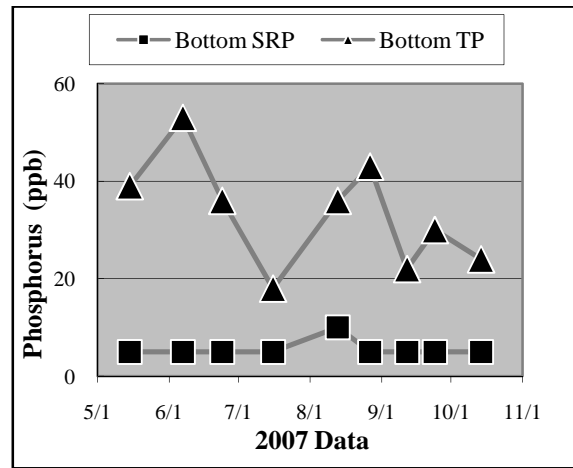
a.



b.

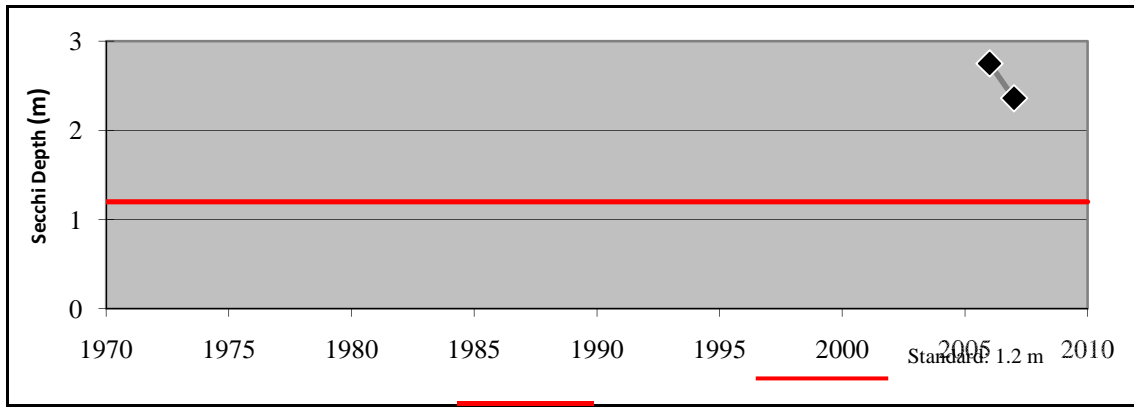


c.

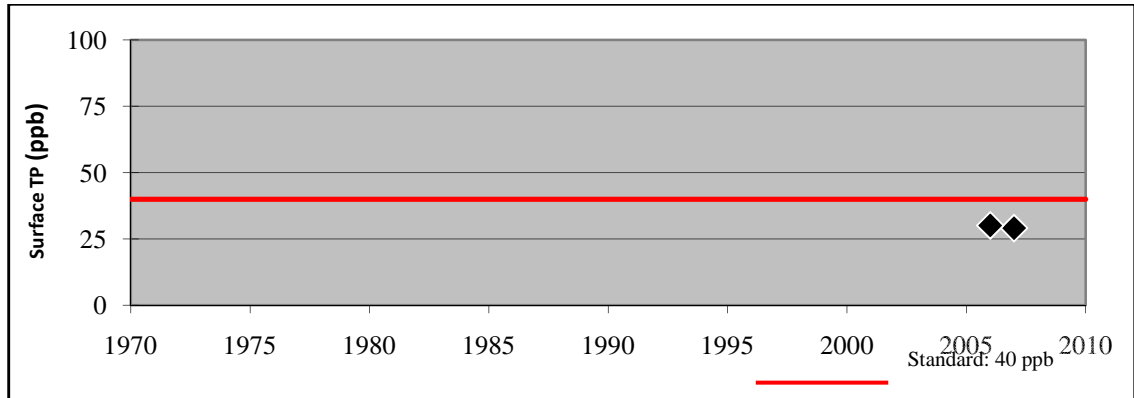


d.

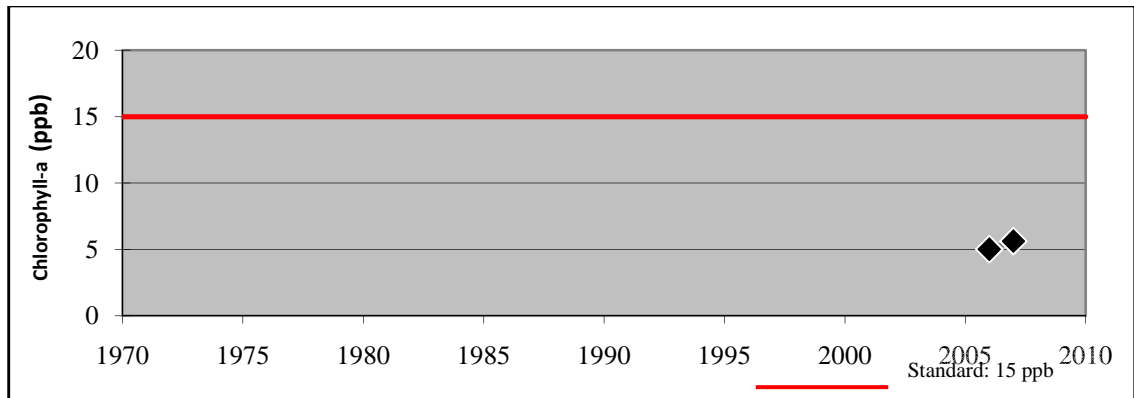
**Figure 2.4 (a-d) Carsons Bay  
2007 Grade: B+**



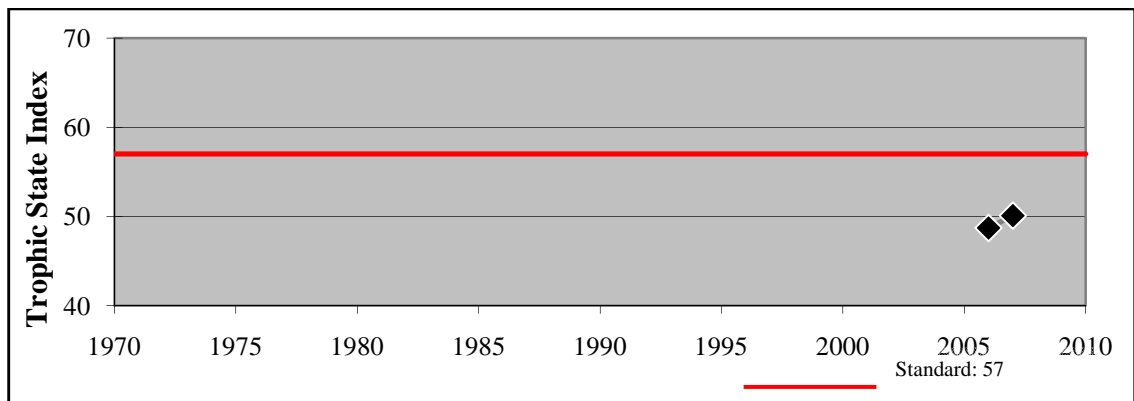
e.



f.



g.



h.

**Figure 2.4 (e - h) Carsons Bay - Summer Mean Values**