

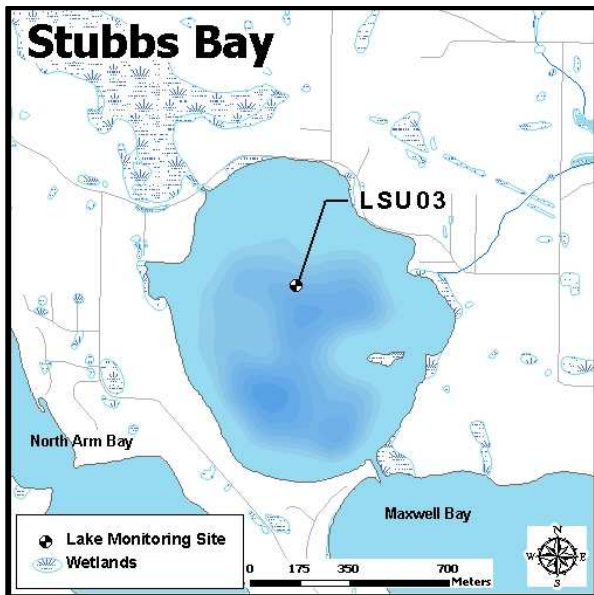
Stubbs Bay (27-0133-12)

MCWD Site ID: LSU03

Sample Location GPS Coordinates: 44.9699N, -93.6156W

Surface Area (acres): 195

Max. Depth (ft): 37



Site Information

Lake Minnetonka is a class 2B lake protected for aquatic life and recreation. Stubbs Bay connected by channel to the north side of Lake Minnetonka near the city of Orono. The bay is adjacent to Maxwell Bay. Water Quality information is available starting in 1996. 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.

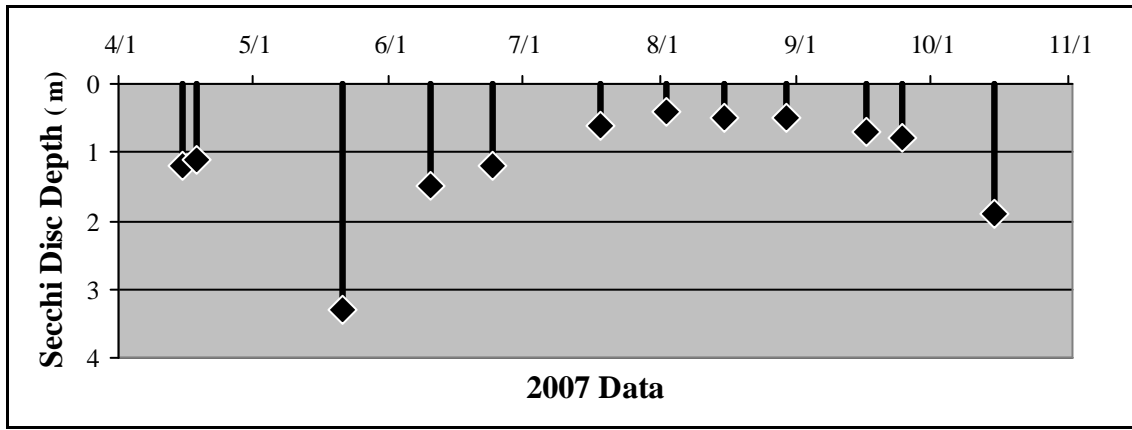
2007 Data Summary

- Secchi disc depth began declining in late May and by July concentrations were below the standard (1.2 m) and remained there for the majority of the season.
- Chlorophyll-*a* concentrations were below the standard (15 ppb) for the entire seasons despite gradually increasing as the summer progressed.
- TP concentrations started above the standard (40 ppb) and then dropped in mid-May. Increases above the standard followed until mid-July where concentrations again dropped below the standard before climbing again in early September.

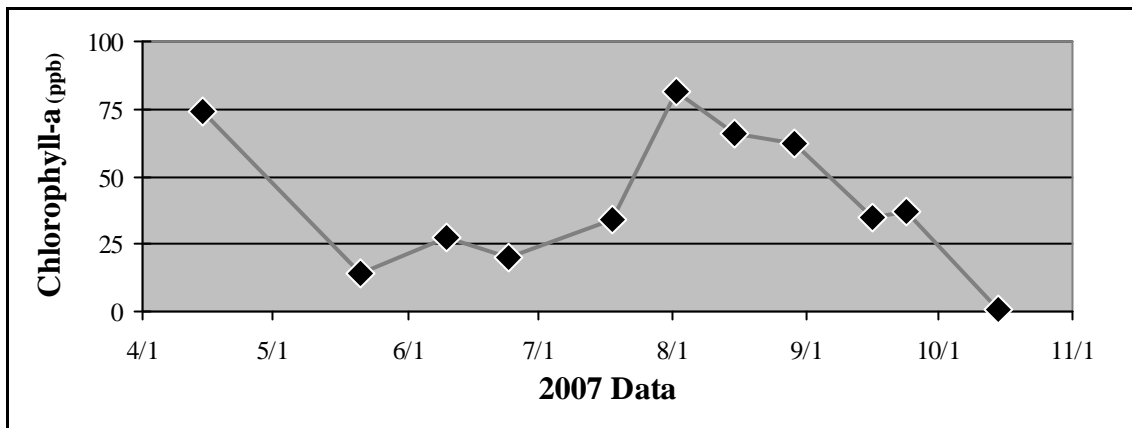
Table 2.23 Stubbs Bay 2007 Summary

2007 Summer (May-September) Water Quality Summary				
Parameter	Range	Mean	Grade	TSI value *
Secchi Depth (m)	0.4 - 3.3	0.8	D	64
Surface TP ($\mu\text{g/L}$)	30 - 65	49.8	C	60
Chlorophyll- <i>a</i> ($\mu\text{g/L}$)	13.9 - 81.2	45.2	C	68
		Overall Score	C-	64

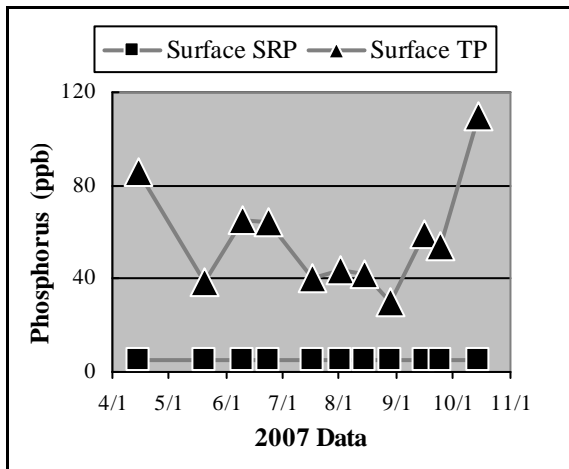
**excludes May Data*



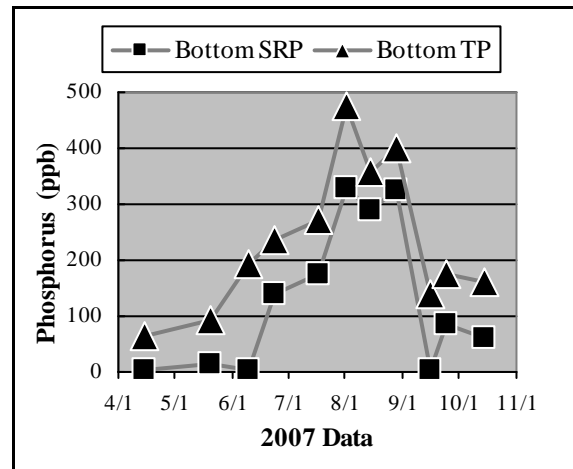
a.



b.

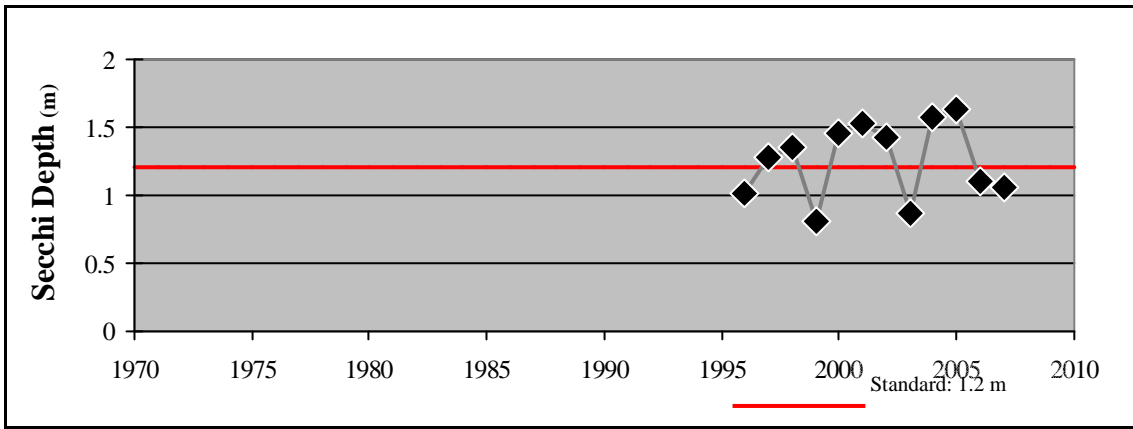


c.

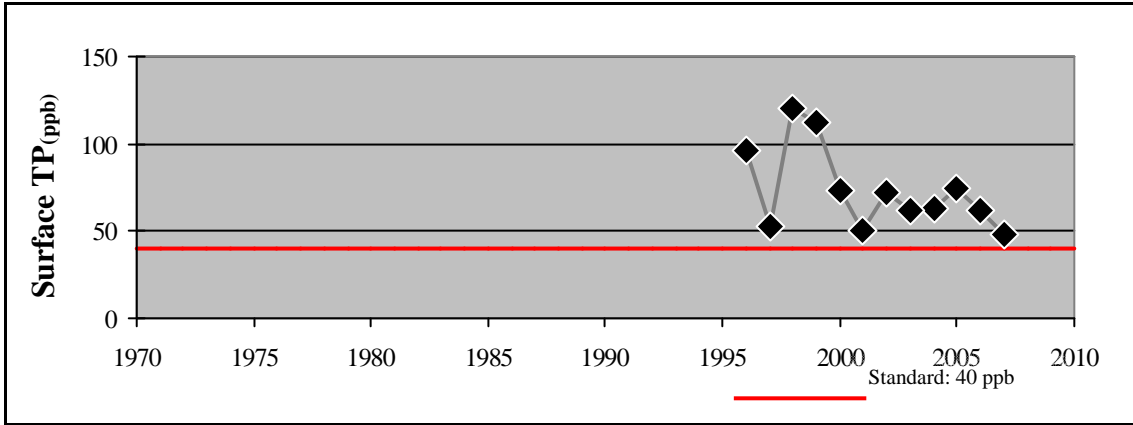


d.

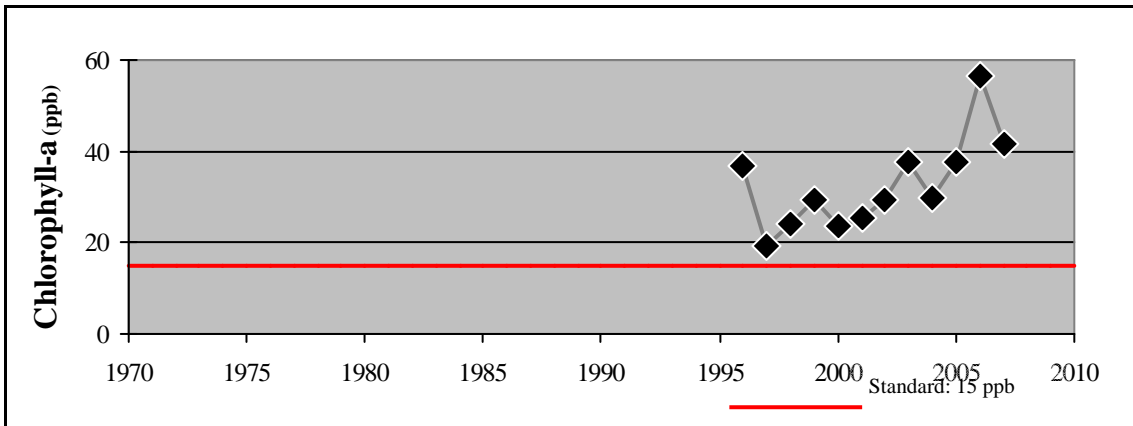
Figure 2.25 (a-d) Stubbs Bay
2007 Grade: C-



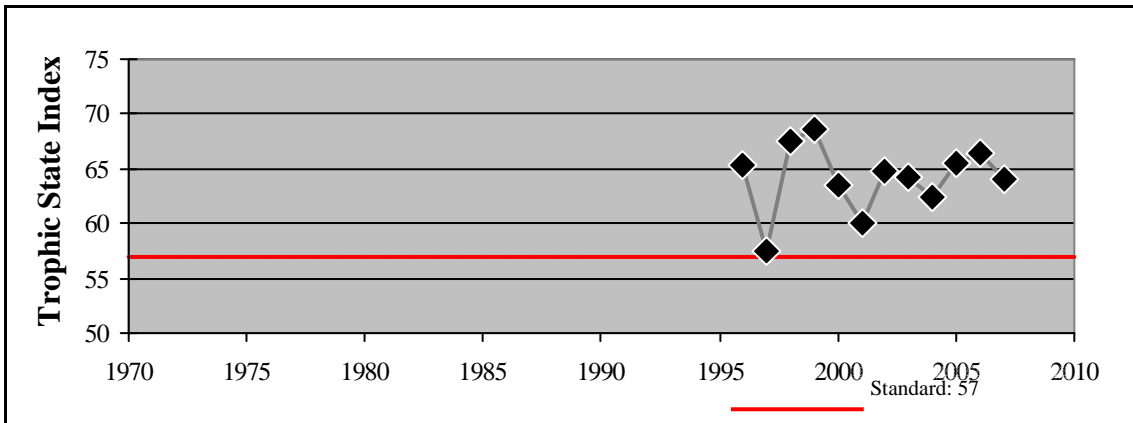
e.



f.



g.



h.

Figure 2.25 (e - h) Stubbs Bay - Summer Mean Values