

Clark

Lake Overview

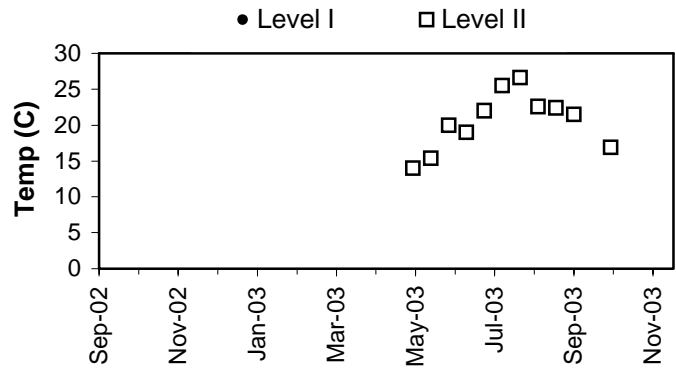
Monitoring began at Clark Lake in 2003. The data collected classify this lake in the city of Kent at moderate to high in primary productivity (mesotrophic - eutrophic) with fair water quality. Since the lake surface makes up only 2% of the 338-acre catchment basin, direct precipitation is less important than stormwater runoff and groundwater inputs. There is a 46 acre Class 1 wetland, which includes the lake and extends west into land historically used as pasture (King County, 1990).

Clark Lake is included in a Kent city park and is open to car top boats. City staff and lake users should watch nearshore aquatic plants to catch early infestations of Eurasian milfoil, Brazilian elodea or other noxious aquatic weeds.

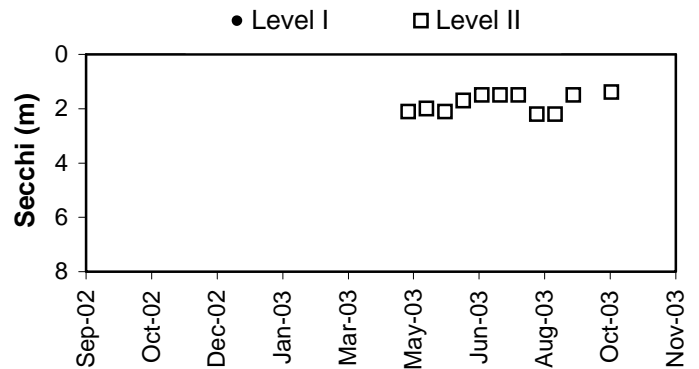
Physical Parameters

The Level II Secchi transparency ranged between 1.4 and 2.2m during the sampling season. The May through October surface water temperatures reached a maximum of 26.6 degrees Celsius. No precipitation or water level records were available for the year.

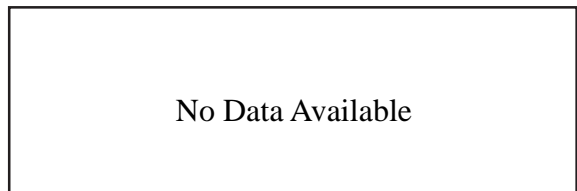
Lake Temperature



Secchi Depth

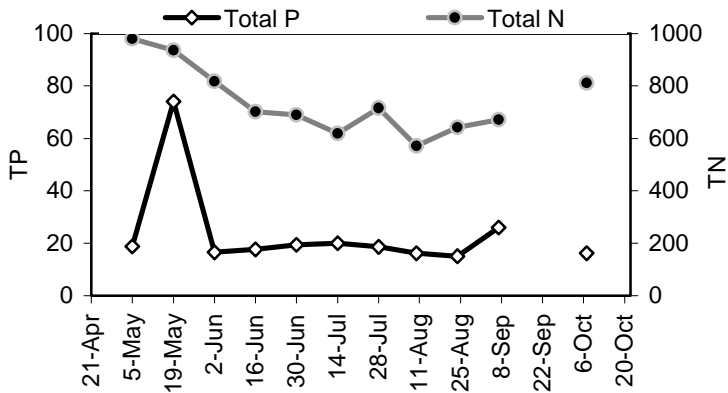


Lake Level and Precipitation

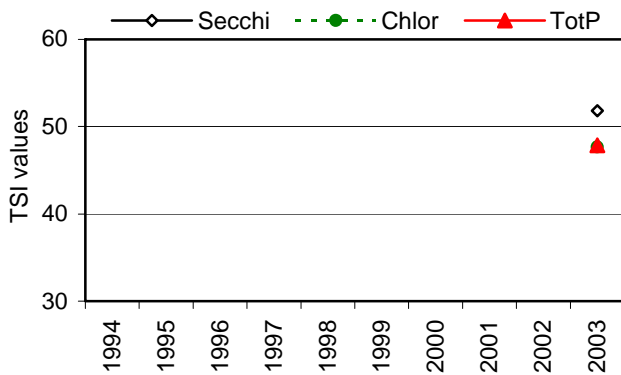


Clark

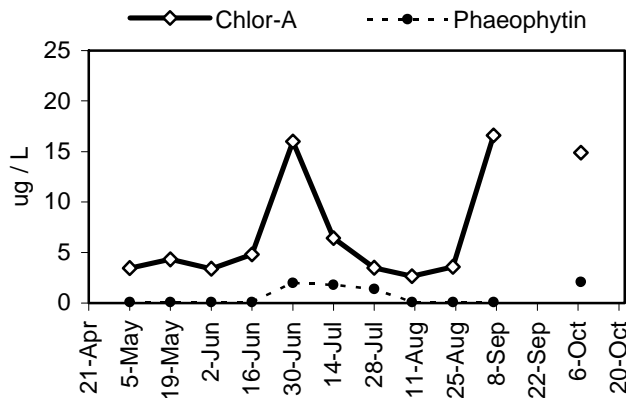
Nutrient Analysis



TSI Ratings



Chlorophyll a Concentrations (ug/L)



Nutrient Analysis and TSI Ratings

Total phosphorus remained fairly constant through the season, with one anomalous high value in May, while total nitrogen decreased slowly from May through July and then rose again in September. The N:P ratio ranged from 13 to 52, suggesting occasionally good conditions for bluegreens. The 2003 TSI values for the three indicators straddled the line between mesotrophic and eutrophic, with TSI-Secchi higher than the other two indicators. This higher value may be affected by water color.

Chlorophyll and Algae

Chlorophyll content peaked in late June and then rose again in fall. The algae were dominated in the spring peak by *Cryptomonas* species and in fall by the bluegreen *Anabaena*. The chrysophyte *Dinobryon* was also important in the phytoplankton.

| Common algae | Group |
|------------------------|-------------|
| <i>Anabaena</i> sp. | bluegreen |
| <i>Cryptomonas</i> sp. | cryptophyte |
| <i>Dinobryon</i> sp. | chrysophyte |

No Level I Data
Available For This Lake

| Date (2003) | Temp (°C) | Secchi (m) | Chl-a (µg/l) | TP (µg/l) | TN (µg/l) | Algae Obsv. | N:P | Calculated TSI | | | Notes |
|----------------|--------------|---------------|-----------------|--------------|--------------|----------------|-----|----------------|-------|------|----------------------------------------------------------|
| | | | | | | | | Secc | chl-a | TP | |
| 21-Apr | | | | | | | | | | | No Sample. Began monitoring 5-May-03. |
| 5-May | 14.0 | 2.1 | 3.5 | 18.7 | 980 | 1 | 52 | 49.3 | 42.8 | 46.4 | |
| 19-May | 15.4 | 2.0 | 4.3 | 74.0 | 936 | 1 | 13 | 50.0 | 44.9 | 66.2 | |
| 2-Jun | 20.0 | 2.1 | 3.4 | 16.5 | 818 | 1 | 50 | 49.3 | 42.6 | 44.6 | |
| 16-Jun | 19.0 | 1.7 | 4.8 | 17.6 | 702 | 2 | 40 | 52.3 | 46.0 | 45.5 | Chlor-a analysis error. Estimated Chlor-a is 4.8 ug/L |
| 30-Jun | 22.0 | 1.5 | 16.0 | 19.4 | 690 | 2 | 36 | 54.1 | 57.8 | 46.9 | |
| 14-Jul | 25.5 | 1.5 | 6.4 | 19.9 | 619 | 1 | 31 | 54.1 | 48.8 | 47.3 | |
| 28-Jul | 26.6 | 1.5 | 3.5 | 18.6 | 716 | | 38 | 54.1 | 42.9 | 46.3 | |
| 11-Aug | 22.6 | 2.2 | 2.7 | 16.1 | 572 | 1 | 36 | 48.6 | 40.2 | 44.2 | |
| 25-Aug | 22.4 | 2.2 | 3.6 | 15.1 | 642 | 2 | 43 | 48.6 | 43.1 | 43.3 | |
| 8-Sep | 21.5 | 1.5 | 16.6 | 25.9 | 672 | 3 | 26 | 54.1 | 58.1 | 51.1 | |
| 22-Sep | | | | | | | | | | | No sample. |
| 7-Oct | 16.9 | 1.4 | 14.9 | 16.1 | 811 | 3 | 50 | 55.1 | 57.1 | 44.2 | |
| 20-Oct | | | | | | | | | | | No sample. |
| | Temp (°C) | Secchi (m) | Chl-a (µg/l) | TP (µg/l) | TN (µg/l) | Algae Obsv. | N:P | Calculated TSI | | | |
| | | | | | | | | Secc | chl-a | TP | |
| Mean | 20.5 | 1.8 | 7.2 | 23.4 | 741.6 | 1.7 | 38 | 51.8 | 47.7 | 47.8 | TSI Average = 49.2 |
| Median | 21.5 | 1.7 | 4.3 | 18.6 | 702.0 | 2 | 38 | 52.3 | 44.9 | 46.3 | |
| Min | 14.0 | 1.4 | 2.7 | 15.1 | 572.0 | 1 | 13 | 48.6 | 40.2 | 43.3 | |
| Max | 26.6 | 2.2 | 16.6 | 74.0 | 980.0 | 3 | 52 | 55.1 | 58.1 | 66.2 | |
| Count | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 11 | 11 | |