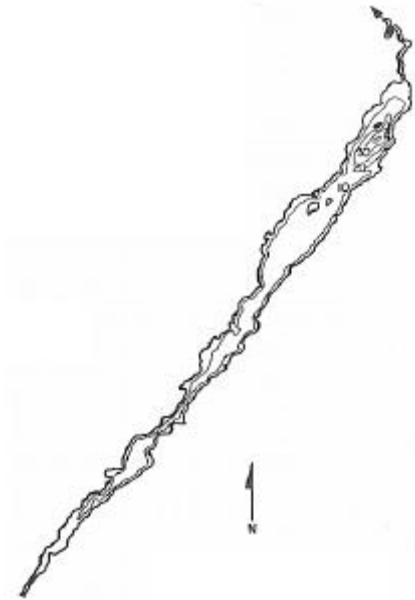


Long Lake



Location

Pond Number: 060241
 Watershed: St. Lawrence River
 County: Hamilton
 Topographic Quadrangle: Long Lake / Blue Mountain

Sample Site

Latitude: 44° 04.241'
 Longitude: 74° 19.760'

Morphometry

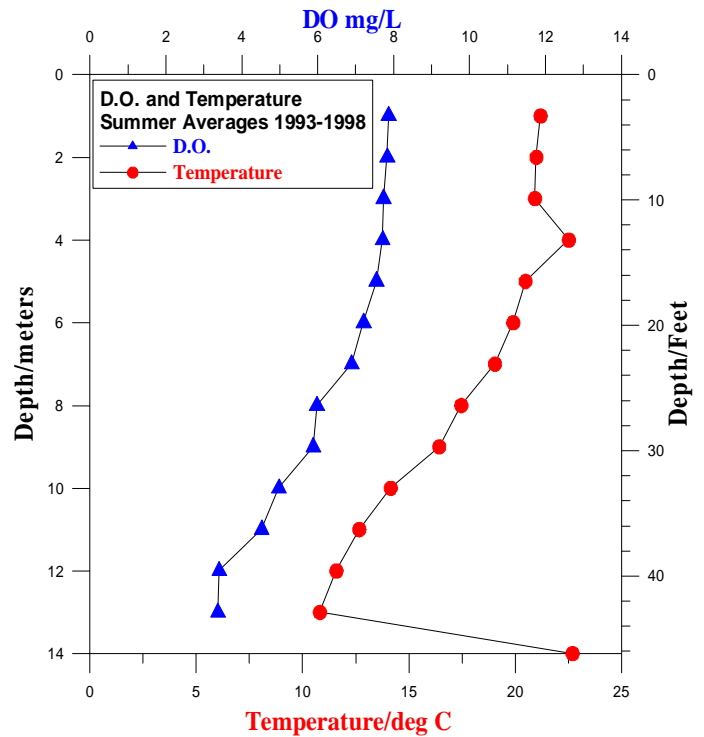
Surface Area: 4,077 Ac.
 Mean Depth: 13 Ft.
 Maximum Depth: 43 Ft.
 Volume: 53,001 Ac./Ft.
 Watershed Area: 301,467 Ac.
 Hydraulic Retention Time: 0.1 Yr.
 Shoreline Length: 35.0 Mi.
 Elevation: 1,627 Ft.
 Water Quality Classification: B
 Trophic State: Mesotrophic

Temperature

Long Lake was thermally stratified during the month of August in each of the study years (1993 - 1998). The epilimnion was warmest in August 1995, when the surface temperature was 24° C. The epilimnion was coolest in August 1993 and 1997, when the surface temperature was 21° C. In August of each year, the epilimnion was approximately 6 meters thick, the mid-thermocline depth was around 8 meters, and the top of the hypolimnion began at about 10 meters. The thermal profiles for August were similar each year.

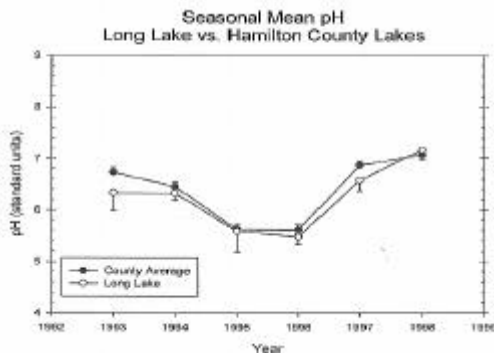
Dissolved Oxygen

The hypolimnion of Long Lake was poorly oxygenated during the month of August in each of the study years (1993 - 1998). The hypolimnetic volume in Long Lake is small. Although there was no overall trend toward oxygen depletion, the dissolved oxygen concentrations were between 0 mg/L and 3 mg/L in August of each year, reaching nearly anoxic levels in 1993 and 1998. In general, the highest hypolimnetic dissolved oxygen levels occurred in August 1997 and the lowest occurred in August 1998. The dissolved oxygen profiles were relatively similar each year, with the highest concentrations in the epilimnion and decreasing concentrations throughout the thermocline.

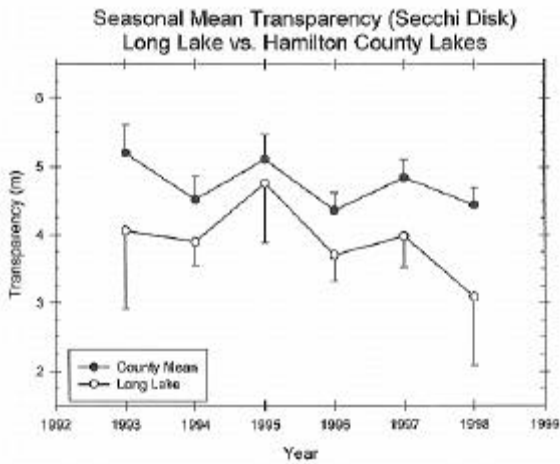


pH

The pH trend for Long Lake was similar to the county mean trend, with a low of 5.49 in 1996, and a high of 7.17 in 1998. Overall, the mean pH values were slightly lower (more acidic) than the county mean values.

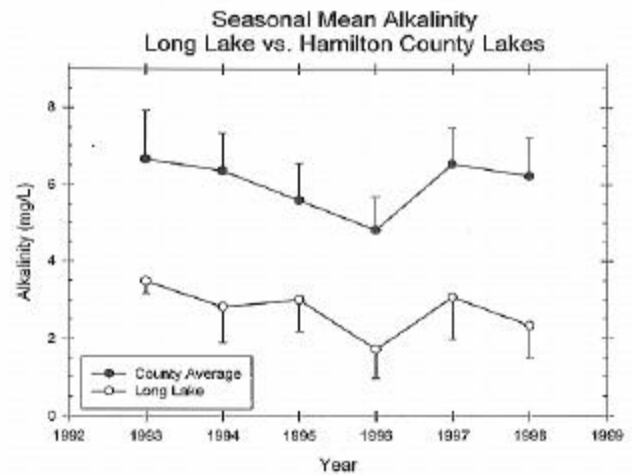


Long Lake



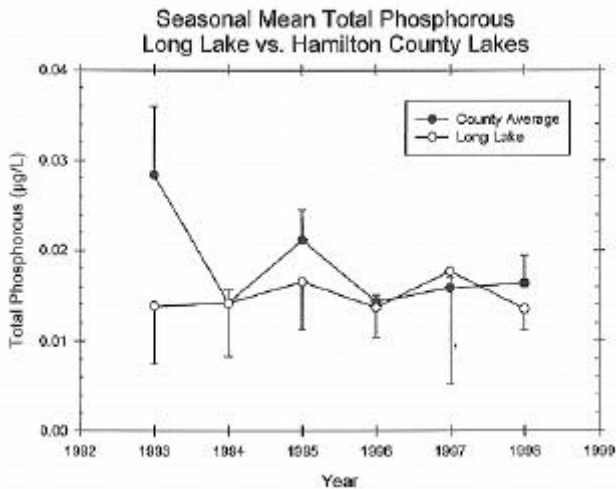
Transparency

The transparency trend in Long Lake was similar to the county mean trend, with a low of 3.09 m in 1998, and a high of 4.76 m in 1995. Overall, the mean transparency values were lower than the county mean values.



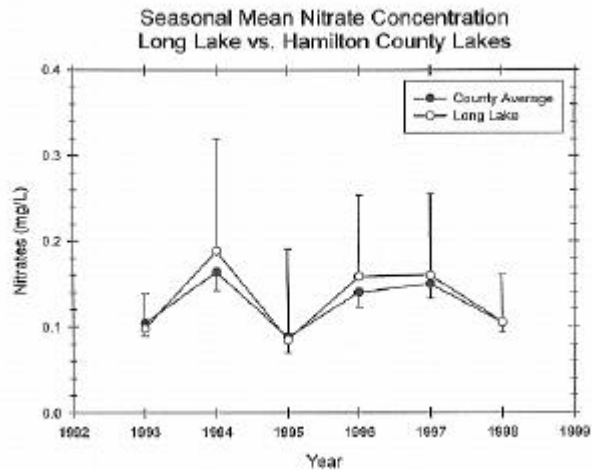
Alkalinity

The alkalinity trend for Long Lake was similar to the county mean trend, with a low of 1.72 mg/L in 1996, and a high of 3.48 mg/L in 1993. Overall, the mean alkalinity values were lower than the county mean values.



Total Phosphorus

The total phosphorus trend in Long Lake was comparable to the county mean trend. A low of 0.014 µg/L occurred in 1993, 1994, 1996 and 1998, and a high of 0.018 µg/L occurred in 1997.



Nitrate

The nitrate concentration trend in Long Lake was comparable to the county mean trend, with a low of 0.09 mg/L in 1995, and a high of 0.19 mg/L in 1994.