Data Report: 25 Years of Extensive Monitoring of Acidified Lakes in the Sudbury Area, 1981 to 2005

George Lake

Cooperative Freshwater Ecology Unit

2006

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This data report is a contribution from the Aquatic Restoration Group of the Cooperative Freshwater Ecology Unit, a partnership between Laurentian University, Xstrata Nickel (formerly Falconbridge Ltd.), CVRD Inco (formerly Inco Ltd.), the Ontario Ministry of the Environment, the Ontario Ministry of Natural Resources and Environment Canada. Prior to use of any of the raw data contained in this report, please contact the senior author, W. Keller.

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Introduction

From 1974 to 1976, a chemistry survey of 209 lakes within ~250 km of Sudbury was conducted to assess the spatial extent of the impacts of emissions from the Sudbury smelters on lake water quality. This survey, named the Sudbury Environmental Study (SES) Extensive Monitoring Programme, revealed that a very large number of lakes had been adversely affected by atmospheric sulphur and metal deposition (Conroy et al. 1976; Keller et al. 1980). During 1981-83, a survey was conducted on 250 lakes, including all the former SES survey lakes and others, to investigate the effects on lake chemistry of the large reductions in SO_2 emissions from the Sudbury smelters that had been implemented during the 1970's (Keller and Pitblado 1986). While many Sudbury area lakes were still heavily affected, comparisons of results between the study periods revealed substantial overall improvements in lake water quality, including reduced acidity and lower metal concentrations (Keller and Pitblado 1986). Data reports from both the above surveys have been previously published (Conroy et al. 1978; Pitblado and Keller 1984).

To provide a continuing record of lake responses to smelter emission reductions, sampling of a subset of 44 of the acidic lakes included in the 1981-83 SES survey has been continued to the present. Figure 1 is a map of the study lake locations. The lakes are within the large zone of historical smelter effects on lake chemistry defined by Neary et al. 1990. Table 1 provides a summary of selected physicochemical characteristics of the study lakes.

The SES lakes selected for continuing study were those that had pH <5.5 in either of the earlier surveys (Conroy et al. 1978; Pitblado and Keller 1984). This pH criterion represents the approximate threshold for damage to acid-sensitive sport fish like the lake trout (*Salvelinus namaycush*) (Matuszek et al. 1992).

Continuation of the SES Extensive Survey has provided ongoing documentation of the positive responses of acidified lakes in northeastern Ontario to reductions in emissions of sulphur and metals from the Sudbury smelters (Keller et al. 1992; Keller et al.1999; Keller et al. 2001a). The current focus of this study is to continue to track the effects on lake water quality of the smelter emission reductions implemented in the 1970's, and more recently, in the early 1990's under the Countdown Acid Rain Programme (MOEE 1994). Overall, sulphur and metal emissions from the Sudbury smelters have been reduced by about 90% in recent decades.

Sudbury area studies have become a very important component of Canadian efforts to assess the effects of acid deposition and determine the needs for additional sulphur emission controls (Jeffries 1997; Jeffries et al. 2005). In recent years, the Sudbury area monitoring program has also become important in the study of the interactive effects of acidification and other large-scale stressors like climate change, base cation depletion and UV-B penetration on aquatic systems (Keller et al. 1992; Yan et al. 1996; Keller et al. 2001b; Keller et al. 2003).

This data report updates the record provided in previous data reports covering the 1981 – 1997 and 1981 – 2000 periods (Keller et al. 1998; Keller et al. 2001c). It summarizes the data collected on the SES Extensive Monitoring Lakes from 1981 to 2005, outlines the field and laboratory methods used and provides time trend plots of key parameters related to lake acidification and metal contamination. This report will be updated as more data become available.

Figure 1: Location of the study lakes. The area within the dotted line indicates the zone of lakes affected by the Sudbury smelter emissions (Neary et al. 1990).

Table 1. Descriptive statistics for physical characteristics and selected chemical parameters measured in 1981 and 2005 for the Sudbury Environmental Study Extensive Monitoring lakes.

Parameter	Mean		Median		Range		N	
	1981	2005	1981	2005	1981	2005	1981	2005
pH	4.9	5.9	4.8	6.0	4.1 - 5.8	4.7 - 7.0	44	43
Alkalinity (TIP) (µeq/L)	-17.9	19.0	-13.2	12.5	-88.0 - 9.2	-25.0 - 130.2	43	44
Conductivity (µS/cm)	49.5	34.5	39.5	24.0	31.0 - 326.0	16.0 - 355.0	44	44
Total Phosphorus (µg/L)	4.5	3.7	4.0	3.1	1.0 - 14.0	0.8 - 10.8	41	44
Secchi (m)	9.7	8.3	8.8	7.0	2.1 - 23.4	1.9 - 27.3	43	44
DOC (mg/L)	1.6	2.5	1.5	2.3	0.1 - 5.5	0.1 - 7.7	43	43
Ca (µeq/L)	157.9	96.2	139.7	86.3	89.8 - 469.1	42.9 - 381.2	40	44
Mg (µeq/L)	78.8	54.8	67.9	44.4	45.2 - 304.4	27.1 - 269.0	40	44
SO_4 (µeq/L)	287.8	154.9	260.3	144.7	197.8 - 884.9	97.9 - 381.0	42	44
Cu (µg/L)	17.1	3.2	2.0	1.6	1.0 - 430.0	0.8 - 27.4	43	44
Ni (µg/L)	54.9	15.5	10.0	6.0	2.0 - 880.0	1.5 - 137.0	42	44
Al (µg/L)	253.3	79.0	220.0	54.1	20.0 - 1200.0	8.2 - 408.0	41	44
Area (ha)	278.1	-	177.3	-	14.5 - 1315.5	-	44	-
Mean Depth (m)	9.2	-	7.5	-	3.8 - 24.1	-	40	-
Maximum Depth (m)	30.7	-	25.0	-	8.0 - 90.3	-	41	-
Distance to Sudbury (km)	59	-	53.0	-	8 - 128	-	44	-

Data Collection

Most of the monitoring lakes are remote and as such were sampled with float-equipped, fixed-wing aircraft. A few lakes accessible by road were sampled by boat. Lakes were sampled once per year, at a location near the lake centre or near the centre of a main basin on very large lakes. Sampling was conducted during the summer stratified period, usually in July.

From 1981 to 1994, lake water samples were collected as non–volume-weighted tygon tube (1.25 cm inside diameter) composites through the epilimnion and metalimnion (MOE 1979). The lower limit of the metalimnion was defined as the depth below the region of greatest temperature change at which the observed temperature decrease was less than or equal to 0.5 ^{o}C /metre. Points of

inflection of lake temperature profiles and respective temperatures were measured with an electronic temperature probe. In lakes too shallow to develop complete thermal stratification, samples were taken to one metre above the lake bottom.

Starting in 1995, samples were collected by hand in four-litre plastic jugs immersed completely beneath the lake surface. Previous investigation had demonstrated that there were no differences in pH, or concentrations of SO_4, Cu or Ni in this set of lakes when surface samples and tube composite samples were compared (Keller and Pitblado 1986). Additional method comparisons were conducted in 1999 and 2002 (Appendix I).

Sample containers were rinsed three times with sample water before final filling. Samples for metal analyses were acidified with concentrated nitric acid. Samples were kept refrigerated at the Cooperative Freshwater Ecology Unit and shipped to other laboratories as soon as possible.

A summary of parameters examined, containers used and the analytical methods and laboratories used for analyses during 1981-2005 are provided in Appendix II. Descriptions of analytical methods are given in MOE (1981) and MOEE (1995). Appendix III provides, in a lake-by-lake format, sample location maps, a summary of physical characteristics, time trend plots of selected chemical variables and a complete chemistry data listing.

Trend Analyses

To assess the significance of time trends in chemical parameters across the study lakes, a Mann-Kendall trend test was used. This non-parametric trend test assesses the rank order of values but does not determine the rate of change (Hamed and Rao 1998). The data were analysed for significant ($p < 0.05$) trends for the whole time period (1981-2005) and for 1990-2005. Null values and outliers were removed and values for Cu, Ni, and Zn were rounded up to 1981 detection limits to

avoid introducing an effect of changing analytical precision. Not all lakes had sufficient data to analyse trends for all parameters. The data are displayed as significant trends (positive or negative) or no significant trend for each time period analysed (Table 2). Significant positive trends were found in the majority of lakes (in both time periods) for pH, while significant negative trends were found in the majority of lakes (in both time periods) for Ca, Mg, SO_4 and many of the metals. Whitson Lake was excluded from the analyses because it historically received a direct mine discharge.

Table 2. Mann-Kendall trend test results for 43 SES lakes during the time periods 1981-2005 and 1990-2005. *Data not available for all lakes.

Parameter	1981-2005			1990-2005		
	Positive	Negative	None	Positive	Negative	None
pH	43	0	0	38	0	5
Conductivity	0	41	2	0	42	1
Alkalinity (TIP)	38	0	5	13	0	30
Ca	0	43	0	0	42	1
Mg	0	43	0	0	40	3
Na	4	2	37	3	1	39
K	0	33	10	0	28	15
Cl	1	6	36	5	1	37
SO_4	0	43	0	0	43	0
SiO_3	4	10	29	3	16	24
Fe	0	31	12	0	23	20
Mn	1	41	1	0	36	7
Al	0	39	4	0	33	10
Cu	0	26	17	0	19	24
Ni*	0	36	5	0	32	11
Zn	0	40	3	0	36	7
TP	1	2	40	1	1	41
TKN	-	-	-	3	2	38
NH_3 + NH_4	-	-	-	0	3	40
NO_2 + NO_3	-	-	-	1	13	29
DOC*	-	-	-	24	0	19
DIC	-	-	-	5	37	0

Acknowledgements

The complete list of people who contributed to this study over the last twenty-five years is much too long to provide here. In particular, we would like to thank Peggy Gale, Jim Carbone, Mike Malette, Jessie Binks and John Gunn for their contributions to various aspects of the programme. A special thanks to Marg Watson and all the staff at Sudbury Aviation for always getting us safely there and back.

Telfer Lake

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Appendix I

In order to streamline sample collection in the SES Extensive Monitoring Programme, beginning in 1995, surface grab samples were taken for chemical analyses instead of the epilimnion/ metalimnion tube composite samples taken between 1981 and 1994. Before 1981 (Keller and Pitblado 1986), the SES Extensive Lakes had been sampled by surface grabs. The change to tube composite sampling in 1981 was introduced to be consistent with the approach that was being used for the large-scale provincial acid rain lake surveys being conducted in the 1980s (MOE 1979). A previous grab/tube composite comparison for 43 of the SES lakes (1983 data; Keller and Pitblado 1986), did not reveal any significant differences in the parameters examined (pH, $SO_{4,}$ Cu, Ni). Here, we conduct a further comparison of surface grab and tube composite results for a large number of chemistry variables, based on samples collected on key MOE study lakes during 1999 and 2002.

Data for simultaneously collected tube composite and surface grab samples were collected from 15 MOE long-term monitoring lakes in northeastern Ontario. In order to maximize the chance of detecting differences, only sampling dates during the summer stratified period were included in this analysis. Depending on the particular chemistry variable, between 22 and 49 sample results were available for comparison. Comparisons were conducted using paired t tests.

Comparisons did not identify significant differences for most of the 22 lake chemistry variables that were examined (Appendix Table I). Eight variables did show significant differences ($p<0.05$) between surface grabs and tube composite samples. Seven variables (Al, DIC, Fe, Mn, SiO_3, $NO_2 + NO_3$ and Zn) were significantly higher in tube composites, while 1 variable (pH) was lower in tube composites. However, observed absolute differences based on comparisons of mean values were generally small. Even in cases where percent differences were large (>100%), actual concentrations and concentration differences were still low.

Differences due to method should be considered in interpretations of time series data from lakes that include data from both methods.

Appendix Table 1. Paired t-test results (significant at $p < 0.05$) for differences between mean grab and mean tube composite samples.

Parameter	Number of Samples	Grab Mean	Tube Composite Mean	Conclusion
Alk (TIP) (mg/L)	49	5.7774	6.4048	Same
Al (mg/L)	40	0.0476	0.0563	Different
Ca (mg/L)	35	2.6306	2.7977	Same
Cl (mg/L)	22	4.7682	4.8282	Same
Cond (µs/cm)	42	31.029	31.943	Same
Cu (mg/L)	40	0.0031	0.0033	Same
DIC (mg/L)	35	1.1817	1.5554	Different
DOC (mg/L)	34	3.0176	3.0382	Same
Fe (mg/L)	40	0.0582	0.1295	Different
K (mg/L)	35	0.4309	0.4483	Same
Mg (mg/L)	35	1.1079	1.1203	Same
Mn (mg/L)	40	0.0346	0.0462	Different
Na (mg/L)	35	2.4271	2.4016	Same
$NH_4 + NH_3$ (mg/L)	32	0.0257	0.0254	Same
Ni (mg/L)	40	0.016	0.0165	Same
$NO_2 + NO_3$ (mg/L)	32	0.0081	0.0195	Different
pH	48	6.3988	6.2037	Different
SiO_3 (mg/L)	36	0.8011	0.9394	Different
SO_4 (mg/L)	23	7.8422	7.6317	Same
TKN (mg/L)	33	0.2254	0.2153	Same
TP (mg/L)	35	0.0091	0.0098	Same
Zn (mg/L)	40	0.0036	0.0076	Different

Appendix II

A summary of water chemistry parameters examined, sample containers used, analytical methods and laboratories used during the SES Extensive Monitoring Programme. Not all parameters were sampled during every study year.

Parameter	1981-1985	1986-1996	1997	1998-2001	2002-2003	2004	2005
Cl	Colour - Rexdale[1]	Colour - Rexdale[2]	IC - Dorset[2]	Colour - Rexdale[2]	IC - Dorset[2]		
SO_4	IC - Rexdale[1]	IC - Rexdale[2]	IC - Dorset[2]	IC - Rexdale[2]	IC - Dorset[2]		
Ca / Mg / Na / K	AAS - Rexdale[1]	AAS - Rexdale[2]	AAS - Dorset[2]	AAS - Rexdale[2]	AAS - Dorset[2]		
SiO_3	Colour - Rexdale[1]	Colour - Rexdale[2]			Colour - Dorset[2]		
DOC	Colour - Rexdale[3]		Colour - Rexdale[2]		Colour - Dorset[2]		
DIC	Colour - Rexdale[3]		Colour - Dorset[4]	Colour - Rexdale[2]	Colour - Dorset[4]		
Total Phosphorus	Colour - Rexdale[1]	Colour - Rexdale[2]	Colour - Dorset[5]	Colour - Rexdale[2]	Colour - Dorset[5]		
Phosphates	Colour - Rexdale[1]	Colour - Rexdale[2]	Not Requested	Colour - Rexdale[2]	Not Requested		
Total Kjeldahl N	Colour - Rexdale[1]	Colour - Rexdale[2]			Colour - Dorset[2]		
$NH_3 + NH_4$	Colour - Rexdale[1]	Colour - Rexdale[2]	Colour - Dorset[2]	Colour - Rexdale[2]	Colour - Dorset[2]		
$NO_2 + NO_3$	Colour - Rexdale[1]	Colour - Rexdale[2]	Colour - Dorset[2]	Colour - Rexdale[2]	Colour - Dorset[2]		
NO_2	Colour - Rexdale[1]	Colour - Rexdale[2]	Not Requested	Colour - Rexdale[2]	Not Requested		
Al / Cu / Ni / Pb / Zn	AAS - Rexdale[1]	ICP-AES - Rexdale[2]	ICP - AES - Rexdale[8]				
Fe / Mn	Colour - Rexdale[1]	ICP-AES - Rexdale[2]	ICP - AES - Rexdale[8]				
pH / Alkalinity(TIP)*	Rexdale[1] / Sudbury[1]	Rexdale[2] / Sudbury[2]	Dorset[6] / Sudbury[2]	Rexdale[2] / Sudbury[7]	Dorset[6] / Sudbury[7]		
Colour	Colour - Rexdale[1]	Colour - Rexdale[2]	Colour - Dorset[2]	Not Requested			Colour - Dorset[2]
Conductivity*	Rexdale[1] / Sudbury[1]	Rexdale[2] / Sudbury[2]	Dorset[2] / Sudbury[2]	Rexdale[2] / Sudbury[2]	Dorset[2] / Sudbury[2]	Dorset[2]	

Method: IC = Ion Chromatography; Colour = Colourimetry; AAS = Atomic Absorption Spectroscopy; ICP-AES = Atomic Emission Spectroscopy;
Container: 1 = 500 mL clear polystyrene; 2 = 500 mL clear polyethylene; 3 = 30 mL glass vials with plastic gas cap; 4 = 50 mL pyrex culture tubes with plastic gas cap; 5 = 50 mL pyrex culture tube (in duplicate); 6 = 250 mL amber polyethylene bottle with plastic gas cap; 7 = 500 mL amber polyethylene bottle with plastic gas cap; 8 = 100 mL starplex jar.
*Analysis was by Potentiometry (Conductivity, pH) and Titrimetry (Alkalinity). Alkalinity (TIP) analysis was not conducted in Sudbury in 2005.

Appendix III

Lake-by-lake summaries are provided of sampling station locations and physical characteristics, time trend plots for selected chemistry variables, and chemistry data listings for the SES Extensive Monitoring Lakes. Note that scales in the time trend plots may vary between lakes and units of expression may change between data tables and figures.

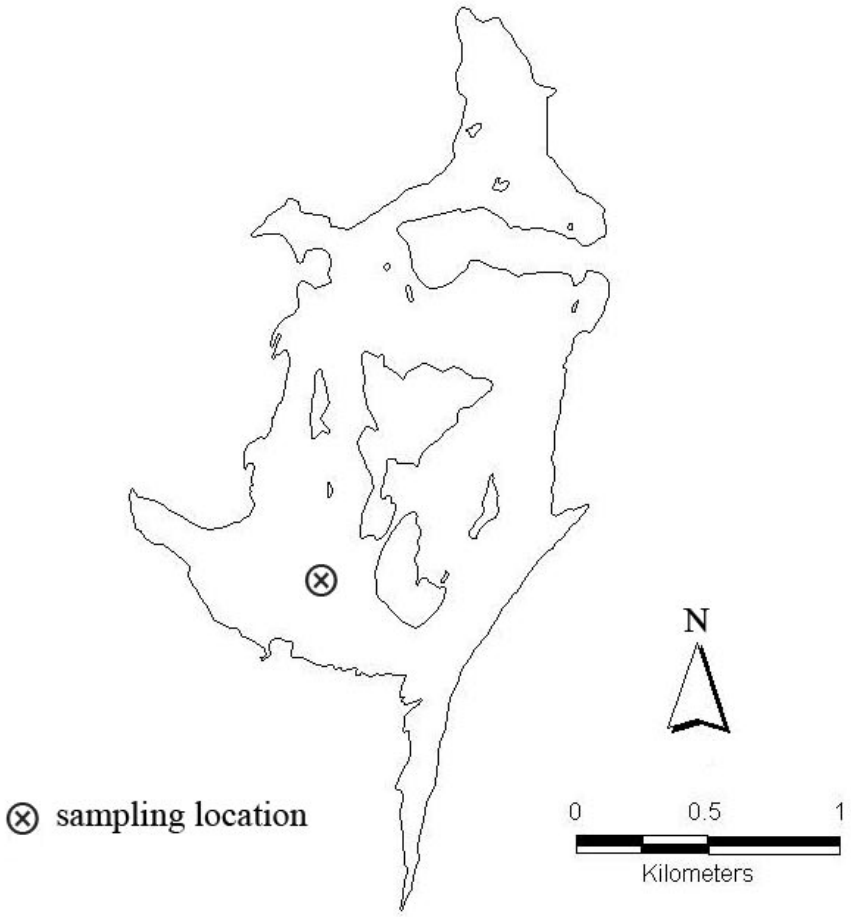
Perimeter and area measurements were obtained using the mapping software MapInfo. The remaining physical data were compiled from a variety of available sources.

Data provided in Appendix III are actual values reported from the laboratories, with the exception of inflection point (TIP) alkalinity values for 1995 and 1996 used in the time trend plots. TIP alkalinity values for those years were estimated from Toronto fixed-endpoint (TFE) alkalinity values according to a relationship derived between these parameters for the study lakes for 1981-95 data ($TIP = 1.085\ TFE - 2.100$; $R2 = 0.90$; $P > 0.001$; $n = 51$).

Data in Appendix III have been visually checked against values originally reported by the laboratory conducting the analyses and the data were screened by examining charge balances of major ions and inspecting data distributions. Obvious spurious values have been removed. However, this sampling programme was designed to monitor general patterns in the chemistry of a group of lakes, based on only one annual sampling. Single samples do not capture within-year variability, and as a result, time trends in individual lakes may show some annual fluctuations related to the limited sampling effort. Therefore, caution is advised in interpreting the data for any one lake, since this study was not designed to provide an intensive lake-specific temporal record.

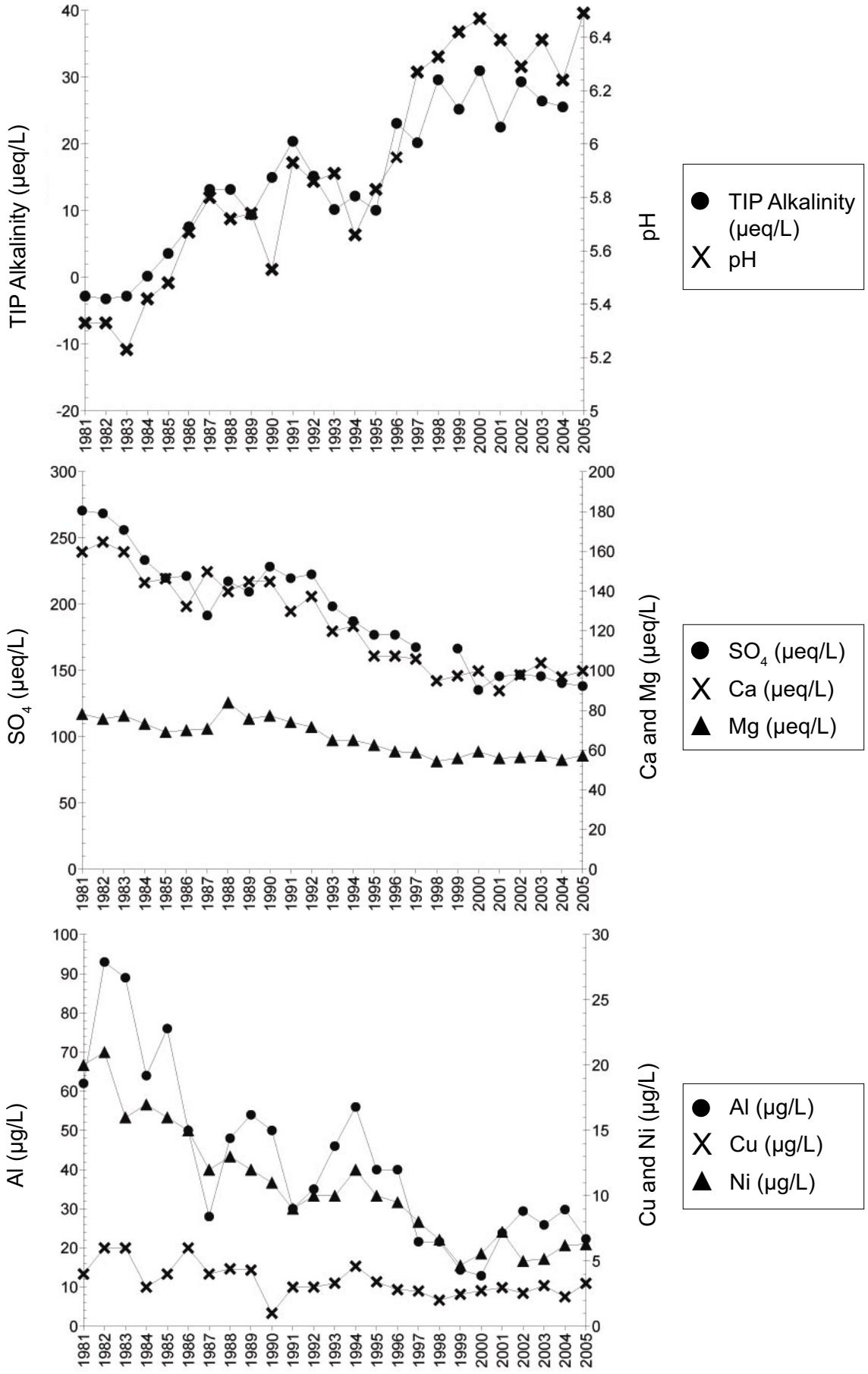
Data qualifiers (V, W, L, T, N, O, C, D) are explained at the bottom of each data table.

Annie Lake



SES ID #	77	**Shoreline length (km)**	12.86
Township	Sale	**Maximum depth (m)**	not available
Latitude	46°10’	**Mean depth (m)**	not available
Longitude	81°08’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	40	**Area (ha)**	196.50
Elevation (m)	236	**Road access**	No
Watershed code	2CF05		

Annie Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO_4 (µeq/L)
Ca and Mg (µeq/L)
SO_4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

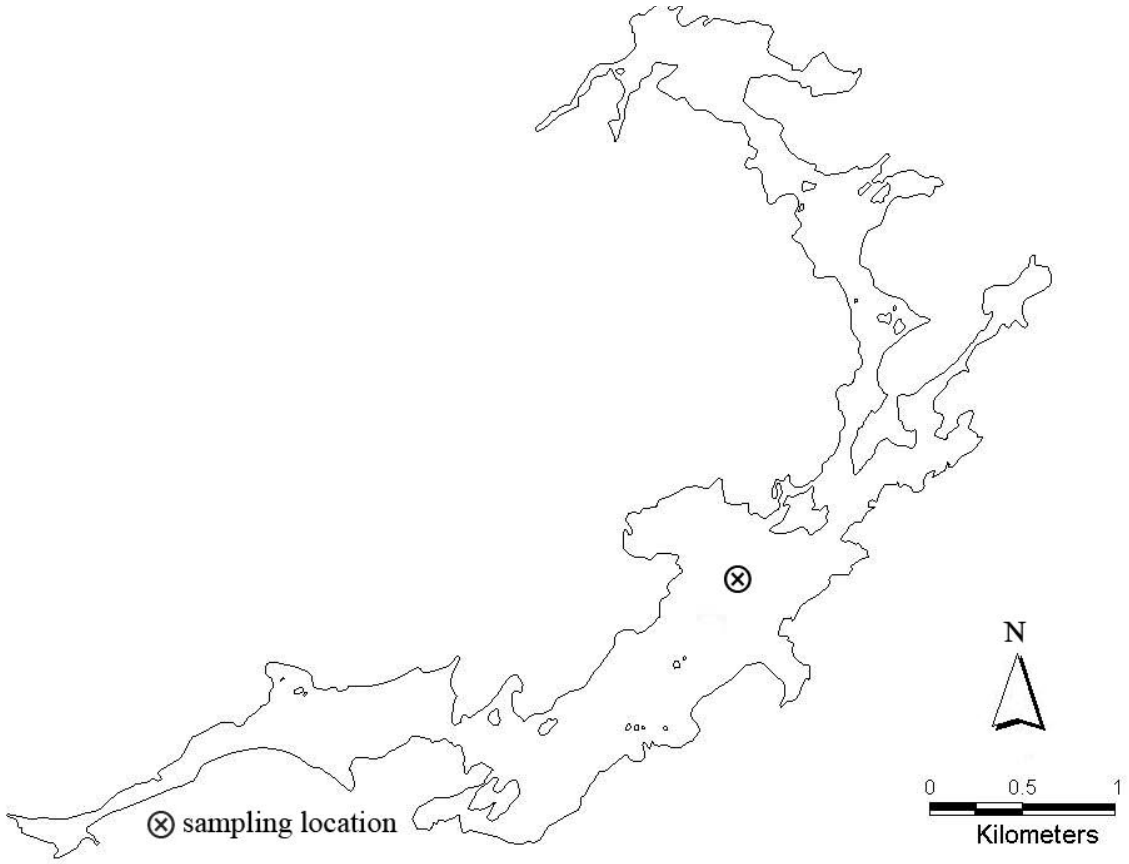
ANNIE SES # 77

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/16/1981	7.40 V	5.33 V	41.0 V	-0.14 V	3.20 V	0.950 V	0.800 V	0.500 V	0.55 V	13.0 V	N	8.1 V	0.300 V
7/06/1982	6.50 V	5.33 V	40.0 V	-0.16 V	3.30 V	0.920 V	N	N	N	12.9 V	N	3.6 V	N
8/01/1983	7.00 V	5.23 V	39.5 V	-0.14 V	3.20 V	0.940 V	1.000 V	O	0.77 V	12.3 V	N	11.0 V	0.630 V
7/18/1984	7.00 V	5.42 V	37.4 V	0.01 V	2.89 V	0.890 V	0.780 V	0.540 V	0.49 V	11.2 V	6.5 V	N	0.240 V
7/14/1985	7.50 V	5.48 V	39.0 V	0.18 V	2.93 V	0.840 V	0.730 V	0.470 V	0.40 V	10.6 V	7.5 V	N	O
7/08/1986	4.00 V	5.67 V	34.0 V	0.38 V	2.65 V	0.850 V	0.730 V	0.490 V	0.45 V	10.6 V	4.0 V	N	0.400 V
7/22/1987	9.80 V	5.80 V	33.0 V	0.66 V	3.00 V	0.860 V	0.760 V	0.500 V	0.35 V	9.2 V	4.5 V	N	0.340 V
7/11/1988	7.00 V	5.72 V	33.6 V	0.66 V	2.80 V	1.020 V	0.840 V	0.510 V	0.60 T	10.4 V	5.0 V	N	0.480 V
7/17/1989	6.50 V	5.74 V	34.3 V	0.47 V	2.90 V	0.920 V	0.800 V	0.510 V	0.40 T	10.1 V	6.5 V	N	0.300 V
7/17/1990	6.50 V	5.53 V	36.3 V	0.75 V	2.90 V	0.940 V	0.840 V	0.530 V	0.40 T	11.0 V	6.0 V	N	0.560 V
7/11/1991	5.50 V	5.93 V	33.5 V	1.02 C	2.60 V	0.900 V	0.840 V	0.500 V	0.30 T	10.6 V	5.0 V	N	0.380 V
7/07/1992	7.00 V	5.86 V	32.5 V	0.76 C	2.75 V	0.870 V	0.820 V	0.490 V	0.40 T	10.7 V	6.0 V	N	0.400 V
7/14/1993	5.50 V	5.89 V	30.6 V	0.51 V	2.40 V	0.790 V	0.760 V	0.426 V	0.30 T	9.5 V	7.6 V	N	0.480 V
7/27/1994	6.00 V	5.66 V	30.3 V	0.61 V	2.45 V	0.790 V	0.750 V	0.446 V	0.20 T	9.0 V	7.4 V	N	0.480 V
7/10/1995	N	5.83 V	30.0 V	0.50 C	2.15 V	0.760 V	0.780 V	0.440 V	0.40 T	8.5 V	10.0 V	N	0.300 V
7/08/1996	N	5.95 V	29.0 V	1.16 C	2.15 V	0.720 V	0.800 V	0.450 V	0.40 T	8.5 V	7.8 V	N	0.400 V
7/15/1997	N	6.27 V	27.0 V	1.01 V	2.12 V	0.715 V	0.730 V	0.425 V	0.35 V	8.1 V	8.0 V	N	0.440 V
7/13/1998	N	6.33 V	25.4 V	1.48 V	1.90 V	0.660 V	0.740 V	0.450 V	0.40 T	O	N	N	0.380 V
7/13/1999	N	6.42 V	26.6 V	1.26 V	1.95 V	0.680 V	0.760 V	0.410 V	0.40 T	8.0 V	N	N	0.160 V
7/18/2000	N	6.47 V	26.1 V	1.55 V	2.00 V	0.720 V	0.800 V	0.440 V	0.40 T	6.5 V	N	N	0.200 V
7/03/2001	N	6.39 V	27.1 V	1.13 V	1.80 V	0.680 V	0.780 V	0.430 V	0.40 T	7.0 V	N	N	0.360 V
7/09/2002	N	6.29 V	25.4 V	1.47 V	1.96 V	0.685 V	0.790 V	0.355 V	0.38 V	7.1 V	N	N	O
7/16/2003	3.80 V	6.39 V	22.6 V	1.32 V	2.08 V	0.695 V	0.845 V	0.430 V	0.36 V	7.0 V	N	N	O
7/06/2004	4.20 V	6.24 V	23.8 V	1.28 V	1.94 V	0.670 V	0.760 V	0.425 V	0.43 V	6.8 V	N	N	0.460 V
7/04/2005	3.50 V	6.49 V	24.0 V	N	2.00 V	0.695 V	0.825 V	0.470 V	0.38 V	6.7 V	N	N	0.360 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/16/1981	0.0500 V	0.0540 V	0.0620 V	0.0040 V	0.0200 V	0.0110 V	0.0080 V	0.18 V	0.024 V	0.006 C	2.2 V	0.40 V
7/06/1982	0.0300 T	0.0630 V	0.0930 V	0.0060 V	0.0210 V	0.0160 V	N	N	N	N	N	N
8/01/1983	0.0400 V	0.0700 V	0.0890 V	0.0060 V	0.0160 V	0.0230 V	N	N	N	N	N	N
7/18/1984	0.0650 V	0.0640 V	0.0640 V	0.0030 V	0.0170 V	0.0110 V	N	N	N	N	N	N
7/14/1985	0.0600 V	0.0580 V	0.0760 V	0.0040 V	0.0160 V	0.0170 V	N	N	N	N	N	N
7/08/1986	0.0500 V	0.0490 V	0.0500 V	0.0060 V	0.0150 V	0.0140 V	N	N	N	N	N	N
7/22/1987	0.0600 V	0.0380 V	0.0280 V	0.0040 V	0.0120 V	0.0010 V	N	N	N	N	N	N
7/11/1988	0.0410 T	0.0380 V	0.0480 T	0.0044 V	0.0130 V	0.0066 V	N	N	N	N	2.5 V	N
7/17/1989	0.0610 T	0.0500 V	0.0540 T	0.0043 V	0.0120 V	0.0078 V	N	N	N	N	2.5 V	N
7/17/1990	0.0500 T	0.0510 V	0.0500 T	0.0010 T	0.0110 V	0.0070 V	N	N	N	N	2.4 V	0.80 T
7/11/1991	0.0200 W	0.0380 V	0.0300 T	0.0030 V	0.0090 T	0.0070 V	0.0050 T	0.26 V	0.020 V	0.005 W	3.0 V	0.20 T
7/07/1992	0.0250 T	0.0290 V	0.0350 T	0.0030 V	0.0100 T	0.0070 V	0.0030 T	0.20 V	0.022 V	0.005 T	3.4 V	0.20 T
7/14/1993	0.0200 W	0.0250 V	0.0460 T	0.0033 V	0.0100 T	0.0050 V	0.0100 V	0.22 V	0.012 V	0.005 W	3.3 V	0.20 T
7/27/1994	0.0410 T	0.0480 V	0.0560 T	0.0046 V	0.0120 V	0.0081 V	0.0060 T	0.24 V	0.032 V	0.005 T	3.2 V	0.40 T
7/10/1995	0.0200 W	0.0330 V	0.0400 T	0.0034 V	0.0100 V	0.0055 V	0.0020 W	0.22 V	0.004 T	0.005 W	3.8 V	0.20 T
7/08/1996	0.0200 W	0.0290 V	0.0400 T	0.0028 V	0.0095 V	0.0055 V	0.0040 T	0.22 V	0.006 T	0.005 W	3.2 V	0.20 W
7/15/1997	0.0104 V	0.0189 V	0.0216 V	0.0027 V	0.0080 V	0.0037 V	0.0048 V*	0.22 V	0.017 V	0.006 T	3.2 V	0.26 V
7/13/1998	0.0159 V	0.0168 V	0.0216 V	0.0020 V	0.0066 V	0.0031 V	0.0060 T	0.24 V	0.004 T	0.005 W	3.3 V	0.20 W
7/13/1999	0.0150 V	0.0129 V	0.0144 V	0.0025 V	0.0047 V	0.0030 V	0.0040 T	0.20 V	0.002 W	0.015 T	3.2 V	0.40 T
7/18/2000	0.0126 V	0.0103 V	0.0129 V	0.0027 V	0.0056 V	0.0023 V	0.0040 T	0.20 V	0.012 V	0.005 W	3.6 V	0.40 T
7/03/2001	0.0109 V	0.0128 V	0.0238 V	0.0030 V	0.0072 V	0.0027 V	0.0060 T	0.22 V	0.004 T	0.005 W	3.9 V	0.40 T
7/09/2002	0.0101 V	0.0206 V	0.0294 V	0.0025 V	0.0050 V	0.0031 V	0.0062 V*	0.25 V	0.028 V	0.006 T	3.9 V	0.40 V
7/16/2003	0.0182 V	0.0113 V	0.0259 V	0.0031 V	0.0052 V	0.0039 V	0.0053 V*	0.22 V	0.036 V	0.006 T	4.2 V	0.44 V
7/06/2004	0.0172 V	0.0128 V	0.0298 V	0.0023 V	0.0062 V	0.0024 V	0.0049 V*	0.16 V	0.014 V	0.004 T	4.1 V	0.46 V
7/04/2005	0.0185 V	0.0106 V	0.0223 V	0.0033 V	0.0063 V	0.0039 V	0.0050 V*	0.20 V	N	N	4.0 V	0.56 V

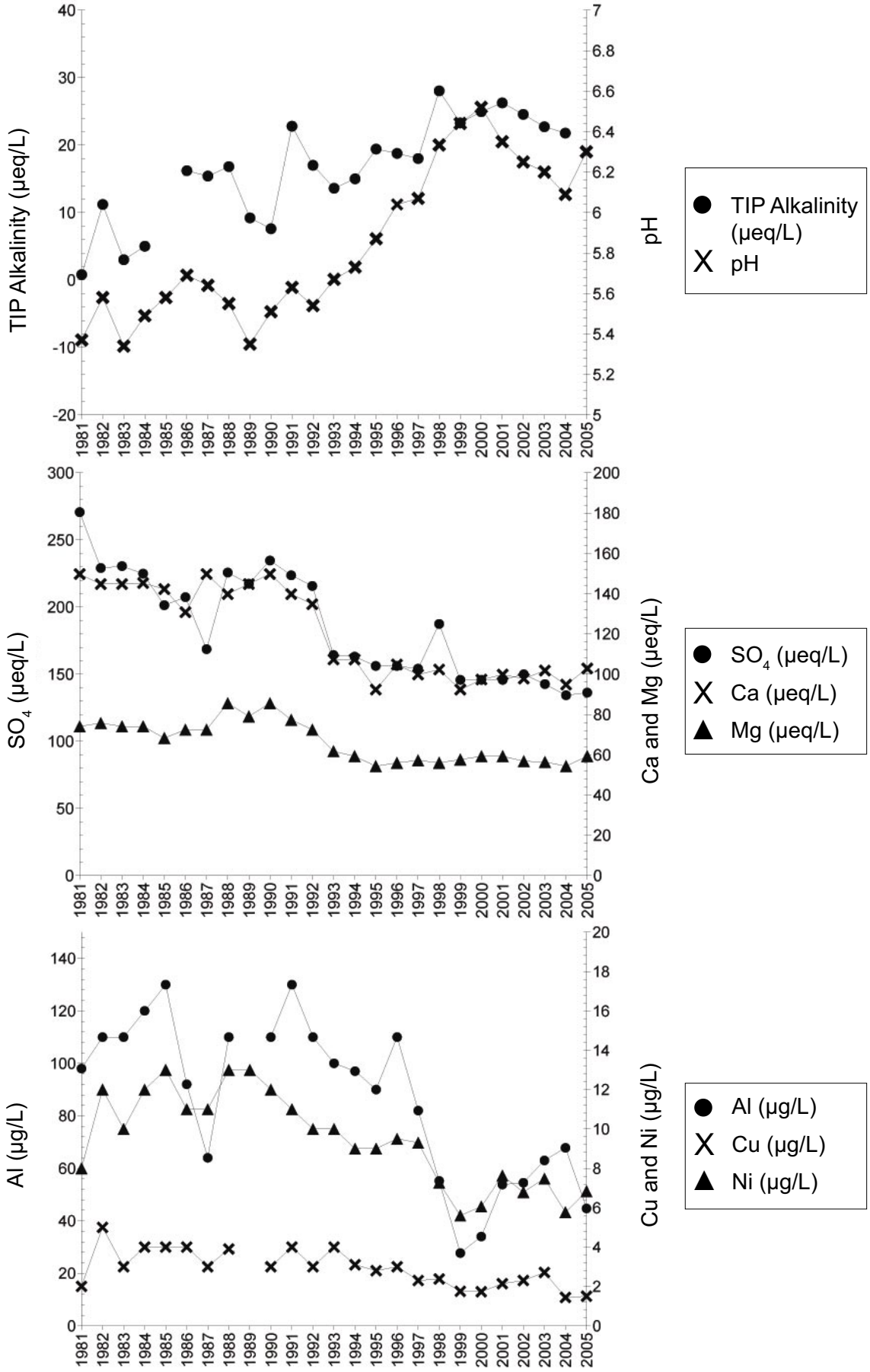
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Bell Lake



SES ID #	114	**Shoreline length (km)**	32.25
Township	Goschen/Sale	**Maximum depth (m)**	26.8
Latitude	46°08’	**Mean depth (m)**	8.0
Longitude	81°11’	**Volume (x 10^4 m^3)**	2247
Distance from Sudbury (km)	48	**Area (ha)**	335.51
Elevation (m)	221	**Road access**	Yes
Watershed code	2CF03		

Bell Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

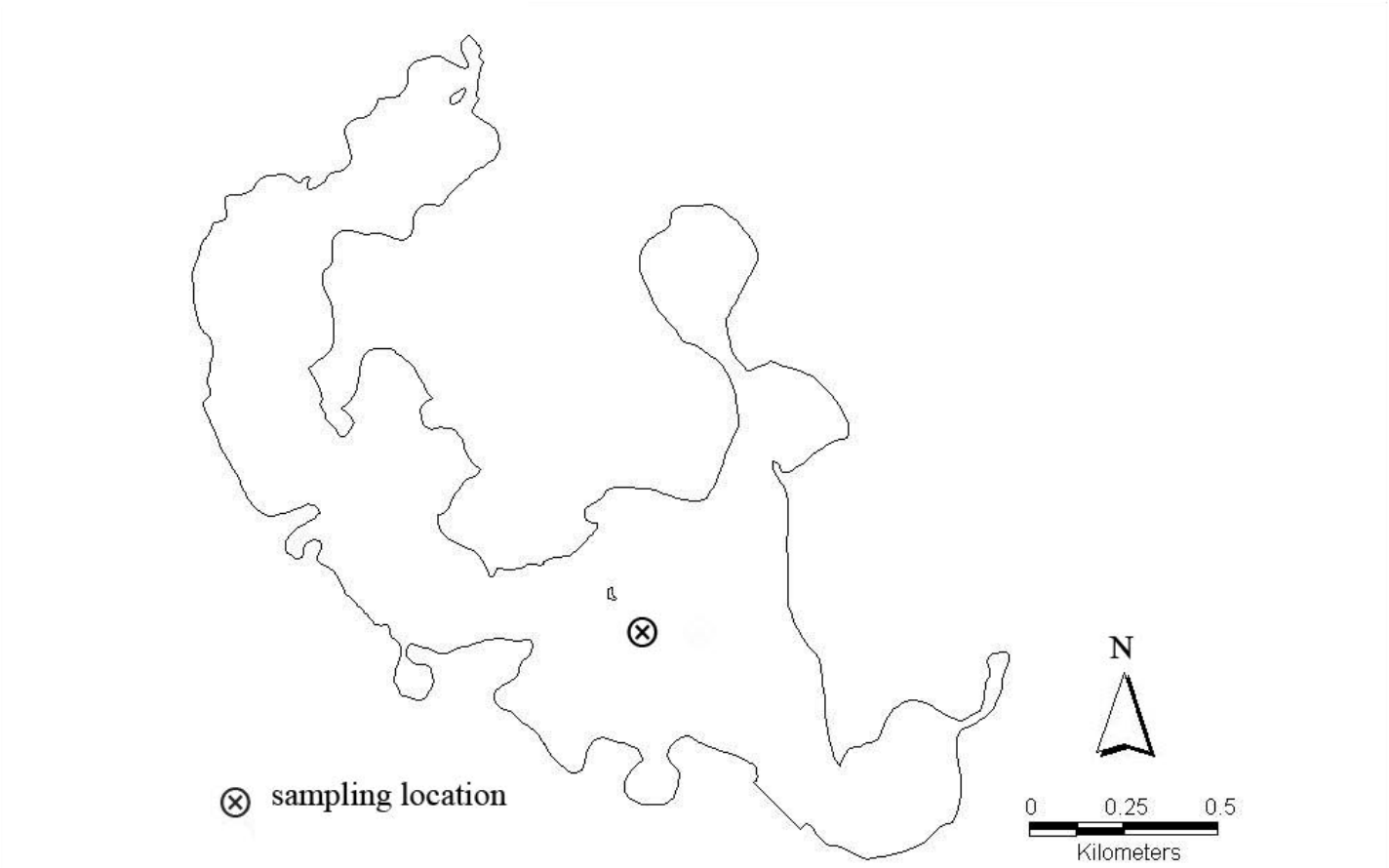
BELL SES # 114

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	5.10 V	5.37 V	37.0 V	0.04 V	3.00 V	0.900 V	1.100 V	0.500 V	0.75 V	13.0 V	N	14.4 V	1.100 V
7/12/1982	4.00 V	5.58 V	38.0 V	0.56 V	2.90 V	0.920 V	N	N	N	11.0 V	N	14.7 V	N
8/01/1983	5.00 V	5.34 V	37.2 V	0.15 V	2.90 V	0.900 V	0.800 V	0.480 V	0.40 V	11.1 V	N	17.3 V	1.220 V
7/30/1984	3.00 V	5.49 V	37.0 V	0.25 V	2.91 V	0.900 V	0.830 V	0.430 V	0.36 V	10.8 V	12.0 V	N	0.960 V
7/14/1985	3.50 V	5.58 V	37.0 V	O	2.85 V	0.830 V	0.790 V	0.460 V	0.45 V	9.7 V	17.0 V	N	1.280 V
7/08/1986	4.00 V	5.69 V	32.0 V	0.81 V	2.62 V	0.880 V	0.780 V	0.420 V	0.40 V	10.0 V	10.5 V	N	1.160 V
7/22/1987	3.25 V	5.64 V	33.0 V	0.77 V	3.00 V	0.880 V	0.820 V	0.450 V	0.35 V	8.1 V	9.5 V	N	1.040 V
6/28/1988	4.20 V	5.55 V	34.9 V	0.84 V	2.80 V	1.040 V	0.840 V	0.470 V	0.80 T	10.8 V	12.0 V	N	1.200 V
7/05/1989	4.80 V	5.35 V	37.4 V	0.46 V	2.90 V	0.960 V	0.920 V	0.470 V	0.70 T	10.4 V	12.5 V	N	1.400 V
7/04/1990	6.10 V	5.51 V	37.5 V	0.38 V	3.00 V	1.040 V	0.960 V	0.480 V	0.80 T	11.3 V	11.0 V	N	1.160 V
7/10/1991	4.80 V	5.63 V	34.9 V	1.14 C	2.80 V	0.940 V	0.880 V	0.470 V	0.80 T	10.7 V	13.5 V	N	1.140 V
7/07/1992	4.50 V	5.54 V	32.8 V	0.85 C	2.70 V	0.880 V	0.860 V	0.410 V	0.50 T	10.4 V	14.5 V	N	1.160 V
7/21/1993	4.70 V	5.67 V	29.2 V	0.68 V	2.15 V	0.750 V	0.800 V	0.394 V	0.30 T	7.9 V	16.8 V	N	1.140 V
7/11/1994	4.30 V	5.73 V	26.5 V	0.75 V	2.15 V	0.720 V	0.760 V	0.399 V	0.40 T	7.8 V	12.4 V	N	1.020 V
7/04/1995	N	5.87 V	27.5 V	0.97 C	1.85 V	0.660 V	0.780 V	0.410 V	0.40 T	7.5 V	15.6 V	N	0.800 V
7/03/1996	N	6.04 V	29.0 V	0.94 C	2.10 V	0.680 V	0.880 V	0.460 V	O	7.5 V	13.8 V	N	1.040 V
7/08/1997	N	6.07 V	25.3 V	0.90 V	2.00 V	0.695 V	0.745 V	0.380 V	0.32 V	7.4 V	15.2 V	N	1.240 V
7/07/1998	N	6.33 V	24.6 V	1.40 V	2.05 V	0.680 V	0.720 V	0.390 V	0.40 T	9.0 V	N	N	0.820 V
7/05/1999	N	6.44 V	26.1 V	1.16 V	1.85 V	0.700 V	0.800 V	0.410 V	0.40 T	7.0 V	N	N	0.740 V
7/05/2000	N	6.52 V	26.2 V	1.25 V	1.95 V	0.720 V	0.820 V	0.390 V	0.40 T	7.0 V	N	N	0.760 V
7/04/2001	N	6.35 V	26.5 V	1.31 V	2.00 V	0.720 V	0.860 V	0.400 V	0.40 T	7.0 V	N	N	0.780 V
7/08/2002	N	6.25 V	25.5 V	1.23 V	1.96 V	0.690 V	0.845 V	0.330 V	0.38 V	7.2 V	N	N	0.760 V
7/14/2003	3.00 V	6.20 V	22.4 V	1.14 V	2.04 V	0.685 V	0.860 V	0.410 V	0.36 V	6.9 V	N	N	0.620 V
7/05/2004	3.45 V	6.09 V	23.4 V	1.09 V	1.90 V	0.660 V	0.785 V	0.420 V	0.42 V	6.5 V	N	N	0.940 V
7/11/2005	O	6.30 V	26.0 V	N	2.06 V	0.720 V	0.845 V	0.420 V	0.41 V	6.6 V	14.8 V	N	0.860 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.1700 V	0.0980 V	0.0980 V	0.0020 V	0.0080 V	0.0100 V	0.0050 V	0.20 V	0.036 V	0.086 C	4.1 V	0.60 V
7/12/1982	0.0750 V	0.0810 V	0.1100 V	0.0050 V	0.0120 V	0.0130 V	N	N	N	N	N	N
8/01/1983	0.0850 V	0.0870 V	0.1100 V	0.0030 V	0.0100 V	0.0160 V	N	N	N	N	N	N
7/30/1984	0.1000 V	0.0990 V	0.1200 V	0.0040 V	0.0120 V	0.0150 V	N	N	N	N	N	N
7/14/1985	0.0790 V	0.0970 V	0.1300 V	0.0040 V	0.0130 V	0.0180 V	N	N	N	N	N	N
7/08/1986	0.0640 V	0.0780 V	0.0920 V	0.0040 V	0.0110 V	0.0110 V	N	N	N	N	N	N
7/22/1987	0.0590 V	0.0800 V	0.0640 V	0.0030 V	0.0110 V	0.0030 V	N	N	N	N	N	N
6/28/1988	0.0790 T	0.0860 V	0.1100 V	0.0039 V	0.0130 V	0.0130 V	N	N	N	N	4.3 V	N
7/05/1989	0.2000 V	0.0990 V	O	O	0.0130 V	0.0240 V	N	N	N	N	4.1 V	N
7/04/1990	0.0400 T	0.0850 V	0.1100 V	0.0030 V	0.0120 V	0.0100 V	0.0060 T	0.26 V	0.018 V	0.085 V	3.9 V	0.20 W
7/10/1991	0.0600 T	0.0720 V	0.1300 V	0.0040 V	0.0110 V	0.0140 V	0.0040 T	0.26 V	0.024 V	0.050 V	4.4 V	0.40 T
7/07/1992	0.0680 T	0.0610 V	0.1100 V	0.0030 V	0.0100 T	0.0100 V	0.0060 T	0.27 V	0.026 V	0.070 V	4.5 V	0.20 T
7/21/1993	0.0610 T	0.0550 V	0.1000 T	0.0040 V	0.0100 T	0.0095 V	0.0080 T	0.28 V	0.022 V	0.070 V	4.6 V	0.60 T
7/11/1994	0.0700 T	0.0600 V	0.0970 T	0.0031 V	0.0090 T	0.0081 V	0.0040 T	0.26 V	0.032 V	0.105 V	4.1 V	0.40 T
7/04/1995	0.0600 T	0.0520 V	0.0900 T	0.0028 V	0.0090 V	0.0075 V	O	0.28 V	0.010 V	0.020 T	4.5 V	0.20 W
7/03/1996	0.1000 V	0.0640 V	0.1100 V	0.0030 V	0.0095 V	0.0080 V	0.0060 T	0.28 V	0.036 V	0.060 V	4.1 V	0.20 W
7/08/1997	0.0523 V	0.0528 V	0.0820 V	0.0023 V	0.0093 V	0.0070 V	0.0076 V*	0.26 V	0.025 V	0.040 V	4.1 V	0.38 V
7/07/1998	0.0464 V	0.0310 V	0.0552 V	0.0024 V	0.0073 V	0.0056 V	0.0040 T	0.24 V	0.004 T	0.005 W	4.4 V	0.60 T
7/05/1999	0.0255 V	0.0155 V	0.0277 V	0.0018 V	0.0056 V	0.0048 V	0.0040 T	0.24 V	0.002 W	0.005 W	4.2 V	0.40 T
7/05/2000	0.0259 V	0.0205 V	0.0340 V	0.0017 V	0.0061 V	0.0050 V	0.0040 T	0.24 V	0.020 V	0.014 T	4.3 V	0.40 T
7/04/2001	0.0298 V	0.0166 V	0.0538 V	0.0021 V	0.0076 V	0.0034 V	0.0060 T	0.24 V	0.004 T	0.005 W	5.3 V	0.40 T
7/08/2002	0.0198 V	0.0391 V	0.0545 V	0.0023 V	0.0068 V	0.0058 V	0.0077 V*	0.28 V	0.036 V	0.008 T	4.7 V	0.38 V
7/14/2003	0.0423 V	0.0323 V	0.0630 V	0.0027 V	0.0075 V	0.0060 V	0.0064 V*	0.26 V	0.038 V	0.006 T	5.4 V	0.40 V
7/05/2004	0.0356 V	0.0264 V	0.0678 V	0.0014 V	0.0058 V	0.0046 V	0.0065 V*	0.26 V	0.018 V	0.024 V	4.7 V	0.48 V
7/11/2005	0.0372 V	0.0098 V	0.0447 V	0.0015 V	0.0068 V	0.0062 V	0.0053 V*	0.27 V	0.002 W	0.004 T	5.0 V	0.52 V

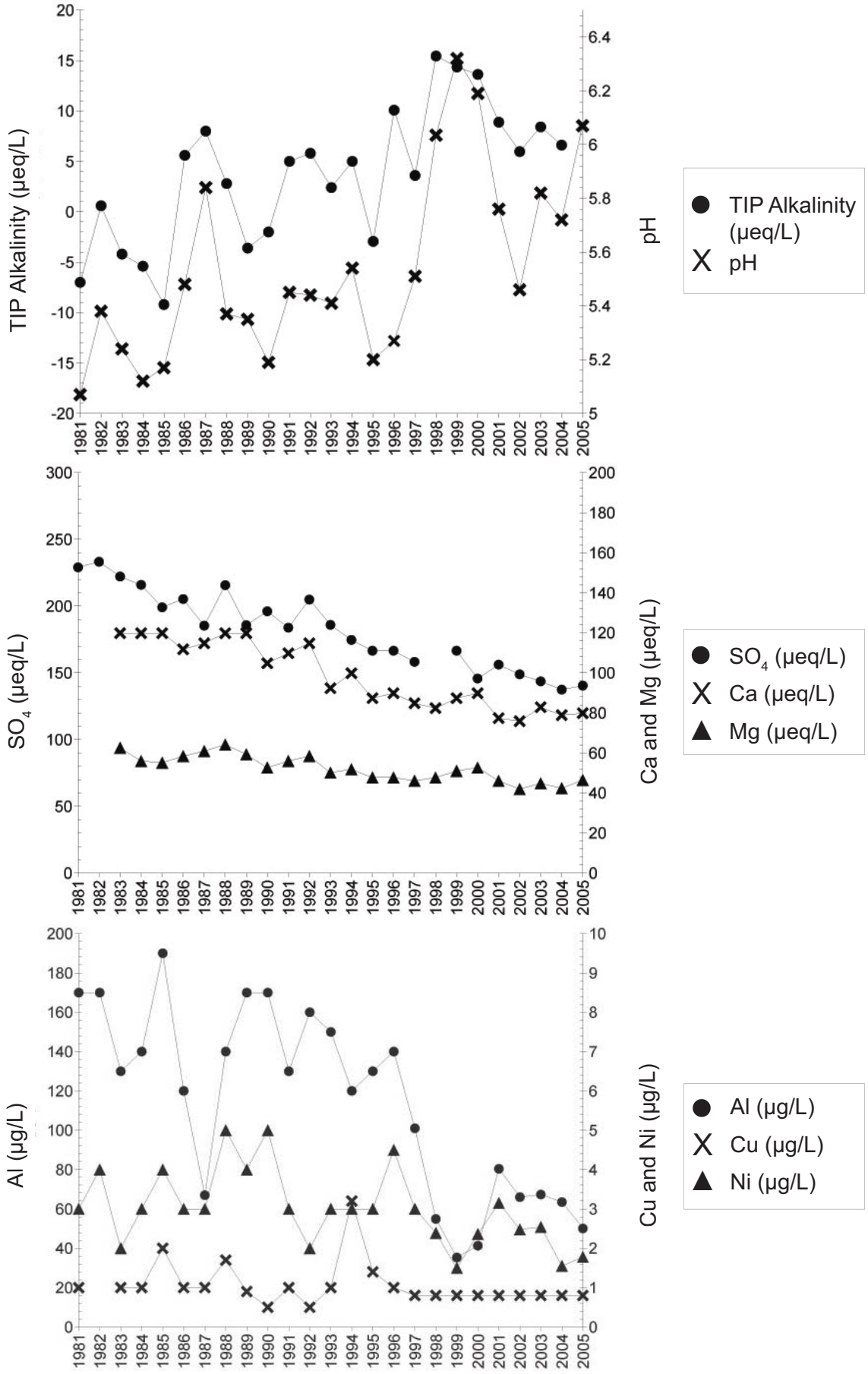
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Bluesucker Lake



SES ID #	236	**Shoreline length (km)**	13.39
Township	Dundee	**Maximum depth (m)**	21.4
Latitude	47°10’	**Mean depth (m)**	7.3
Longitude	80°36’	**Volume (x $10^4 m^3$)**	1045
Distance from Sudbury (km)	81	**Area (ha)**	147.37
Elevation (m)	341	**Road access**	No
Watershed code	2DC09		

Bluesucker Lake



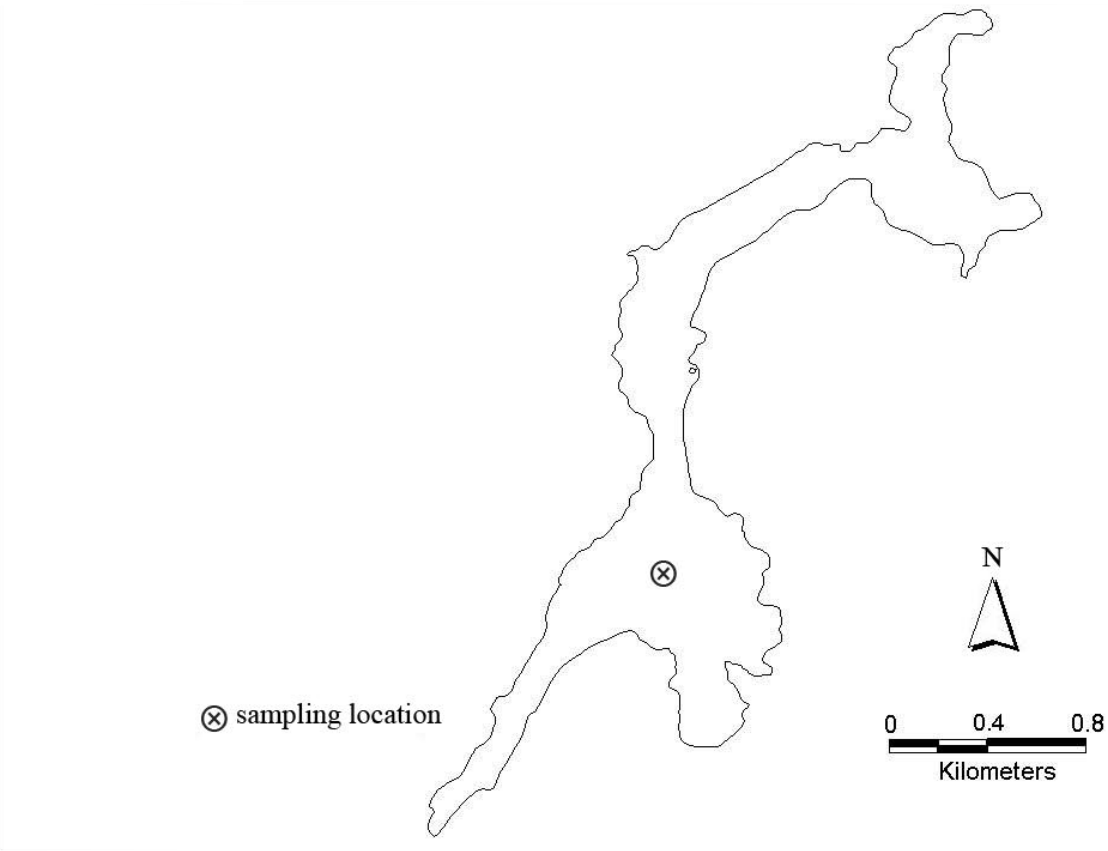
BLUESUCKER SES # 236

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	7.60 V	5.07 V	36.0 V	-0.35 V	N	N	0.800 V	0.450 V	0.30 V	11.0 V	N	2.2 V	1.750 V
7/25/1982	7.00 V	5.38 V	35.0 V	0.03 V	N	N	N	N	N	11.2 V	N	6.1 V	N
8/07/1983	7.00 V	5.24 V	32.9 V	-0.21 V	2.40 V	0.760 V	O	0.560 V	0.70 V	10.7 V	N	5.5 V	1.640 V
7/24/1984	5.00 V	5.12 V	34.5 V	-0.27 V	2.40 V	0.680 V	0.720 V	0.290 V	0.13 T	10.4 V	9.0 V	N	1.640 V
7/30/1985	6.50 V	5.17 V	33.0 V	-0.46 V	2.40 V	0.670 V	0.710 V	0.370 V	O	9.6 V	9.5 V	N	1.590 V
7/21/1986	9.00 V	5.48 V	30.0 V	0.28 V	2.24 V	0.710 V	0.720 V	0.330 V	0.20 V	9.9 V	4.5 V	N	1.800 V
7/15/1987	8.50 V	5.84 V	30.5 V	0.40 V	2.30 V	0.740 V	0.780 V	0.300 V	0.25 V	8.9 V	3.0 V	N	1.680 V
7/13/1988	8.50 V	5.37 V	31.4 V	0.14 V	2.40 V	0.780 V	0.800 V	0.360 V	0.50 T	10.4 V	4.0 V	N	1.680 V
7/26/1989	7.00 V	5.35 V	30.1 V	-0.18 V	2.40 V	0.720 V	0.740 V	0.340 V	0.20 T	8.9 V	6.5 V	N	2.000 V
7/25/1990	8.50 V	5.19 V	29.3 V	-0.10 V	2.10 V	0.640 V	0.820 V	0.340 V	0.20 W	9.4 V	8.5 V	N	1.680 V
7/09/1991	8.20 V	5.45 V	28.0 V	0.25 C	2.20 V	0.680 V	0.780 V	0.350 V	0.30 T	8.8 V	5.0 V	N	1.840 V
7/08/1992	8.00 V	5.44 V	28.2 V	0.29 C	2.30 V	0.710 V	0.760 V	0.410 V	0.20 T	9.8 V	5.0 V	N	1.860 V
7/06/1993	5.10 V	5.41 V	27.5 V	0.12 V	1.85 V	0.610 V	0.700 V	0.297 V	0.20 W	8.9 V	6.2 V	N	1.720 V
7/25/1994	9.00 V	5.54 V	26.3 V	0.25 V	2.00 V	0.630 V	0.710 V	0.332 V	0.20 W	8.4 V	5.0 V	N	1.660 V
7/12/1995	N	5.20 V	26.0 V	-0.15 C	1.75 V	0.580 V	0.660 V	0.260 V	0.20 W	8.0 V	6.8 V	N	1.640 V
7/08/1996	N	5.27 V	25.0 V	0.50 C	1.80 V	0.580 V	0.740 V	0.290 V	0.20 W	8.0 V	5.8 V	N	1.620 V
7/07/1997	N	5.51 V	23.6 V	0.18 V	1.70 V	0.560 V	0.685 V	0.260 V	0.17 V	7.6 V	7.8 V	N	1.740 V
7/12/1998	N	6.04 V	23.7 V	0.77 V	1.65 V	0.580 V	0.840 V	0.300 V	0.20 W	O	N	N	1.580 V
7/13/1999	N	6.32 V	25.4 V	0.72 V	1.75 V	0.620 V	0.800 V	0.300 V	0.20 W	8.0 V	N	N	1.400 V
7/17/2000	N	6.19 V	24.4 V	0.68 V	1.80 V	0.640 V	0.820 V	0.290 V	0.40 T	7.0 V	N	N	1.680 V
7/02/2001	N	5.76 V	24.7 V	0.44 V	1.55 V	0.560 V	0.780 V	0.300 V	0.20 W	7.5 V	N	N	1.600 V
7/09/2002	N	5.46 V	22.7 V	0.30 V	1.52 V	0.510 V	0.720 V	0.250 V	0.19 V	7.2 V	N	N	1.400 V
7/22/2003	N	5.82 V	28.8 V	0.42 V	1.66 V	0.545 V	0.800 V	0.285 V	0.32 V	6.9 V	N	N	1.420 V
7/12/2004	9.10 V	5.72 V	20.0 V	0.33 V	1.58 V	0.515 V	0.745 V	0.275 V	0.20 V	6.6 V	N	N	O
7/07/2005	7.00 V	6.07 V	21.2 V	N	1.60 V	0.565 V	0.730 V	0.275 V	0.21 V	6.8 V	N	N	1.500 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0300 V	0.0820 V	0.1700 V	0.0010 V	0.0030 V	0.0050 V	0.0040 V	0.10 V	0.014 V	0.011 C	2.0 V	0.40 V
7/25/1982	0.0500 V	0.0820 V	0.1700 V	O	0.0040 V	O	N	N	N	N	N	N
8/07/1983	0.0150 V	0.0930 V	0.1300 V	0.0010 V	0.0020 V	0.0070 V	N	N	N	N	N	N
7/24/1984	0.0600 V	0.0850 V	0.1400 V	0.0010 V	0.0030 V	0.0070 V	N	N	N	N	N	N
7/30/1985	0.0480 V	0.0790 V	0.1900 V	0.0020 V	0.0040 V	0.0110 V	N	N	N	N	N	N
7/21/1986	0.0310 V	0.0600 V	0.1200 V	0.0010 W	0.0030 V	0.0050 V	N	N	N	N	N	N
7/15/1987	O	0.0440 V	0.0670 V	0.0010 V	0.0030 V	0.0120 V	N	N	N	N	N	N
7/13/1988	0.0220 T	0.0730 V	0.1400 V	0.0017 T	0.0050 T	0.0068 V	N	N	N	N	2.2 V	N
7/26/1989	0.0490 T	0.0730 V	0.1700 V	0.0009 T	0.0040 T	0.0052 V	N	N	N	N	2.0 V	N
7/25/1990	0.0400 T	0.0710 V	0.1700 V	0.0005 W	0.0050 T	0.0080 V	N	N	N	N	2.6 V	0.40 T
7/09/1991	0.0400 T	0.0580 V	0.1300 V	0.0010 T	0.0030 T	0.0050 V	0.0020 T	0.11 V	0.006 T	0.015 T	2.1 V	0.20 T
7/08/1992	0.0410 T	0.0530 V	0.1600 V	0.0005 W	0.0020 W	0.0040 V	0.0060 T	0.14 V	0.022 V	0.010 T	2.2 V	0.20 W
7/06/1993	0.0380 T	0.0560 V	0.1500 V	0.0010 T	0.0030 T	0.0043 V	0.0040 T	0.16 V	0.012 V	0.005 T	2.3 V	0.20 T
7/25/1994	0.0240 T	0.0610 V	0.1200 V	0.0032 V	0.0030 T	0.0045 V	0.0040 T	0.16 V	0.018 V	0.005 T	2.2 V	0.20 T
7/12/1995	0.0200 W	0.0620 V	0.1300 V	0.0014 V	0.0030 T	0.0045 V	0.0020 W	0.12 V	0.008 T	0.015 T	2.8 V	0.20 W
7/08/1996	0.0200 W	0.0600 V	0.1400 V	0.0010 V	0.0045 T	0.0040 V	0.0040 T	0.16 V	0.012 V	0.005 W	2.4 V	0.20 W
7/07/1997	0.0263 V	0.0531 V	0.1010 V	0.0008 D	0.0030 V	0.0034 V	0.0066 V*	0.16 V	0.016 V	0.002 W	2.5 V	0.36 V
7/12/1998	0.0172 V	0.0424 V	0.0549 V	0.0008 D	0.0024 V	0.0026 V	0.0020 W	0.16 V	0.002 W	0.005 W	2.4 V	0.20 W
7/13/1999	0.0177 V	0.0349 V	0.0353 V	0.0008 D	0.0015 D	0.0022 V	0.0040 T	0.12 V	0.002 W	0.015 T	2.3 V	0.40 T
7/17/2000	0.0161 V	0.0490 V	0.0413 V	0.0008 D	0.0024 V	0.0022 V	0.0020 W	0.12 V	0.002 W	0.005 W	2.2 V	0.40 T
7/02/2001	0.0246 V	0.0546 V	0.0804 V	0.0008 D	0.0032 V	0.0035 V	0.0040 T	0.16 V	0.008 T	0.005 W	3.0 V	0.40 T
7/09/2002	0.0143 V	0.0674 V	0.0660 V	0.0008 D	0.0025 V	0.0028 V	0.0039 V*	0.21 V	0.032 V	0.010 V	2.6 V	0.28 V
7/22/2003	0.0265 V	0.0722 V	0.0673 V	0.0008 D	0.0025 V	0.0031 V	0.0029 V*	0.17 V	0.026 V	0.002 W	2.7 V	0.38 V
7/12/2004	0.0178 V	0.0587 V	0.0635 V	0.0008 D	0.0016 V	0.0028 V	0.0011 V*	0.12 V	0.016 V	0.006 T	4.0 V	0.22 V
7/07/2005	0.0269 V	0.0682 V	0.0501 V	0.0008 D	0.0018 V	0.0029 V	0.0020 V*	0.20 V	0.008 T	0.010 V	2.3 V	0.30 V

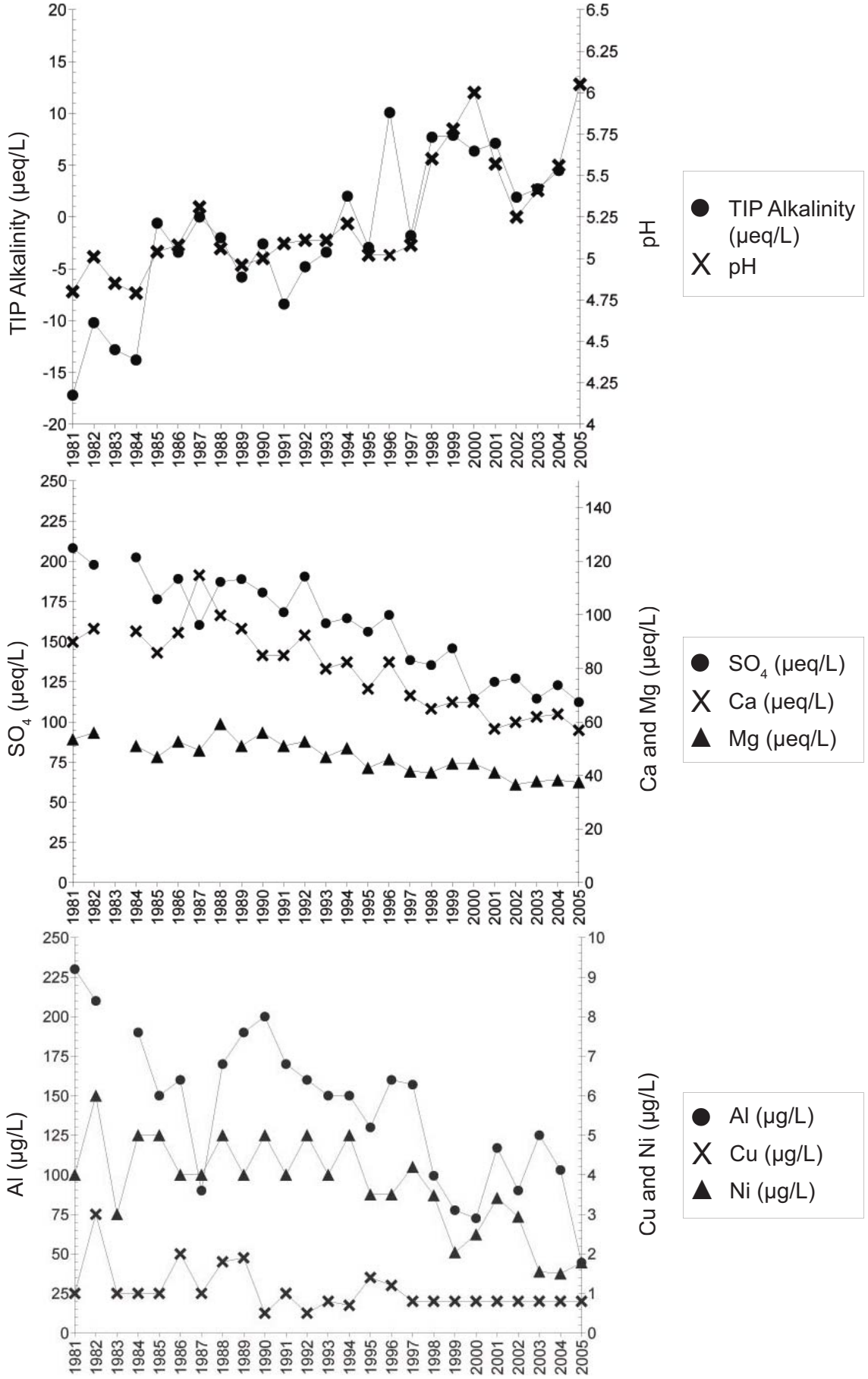
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Bob Lake



SES ID #	183	**Shoreline length (km)**	12.95
Township	Canton	**Maximum depth (m)**	25.0
Latitude	47°10’	**Mean depth (m)**	6.5
Longitude	80°15’	**Volume (x 10^4 m^3)**	1040
Distance from Sudbury (km)	96	**Area (ha)**	139.26
Elevation (m)	310	**Road access**	No
Watershed code	2JD02		

Bob Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

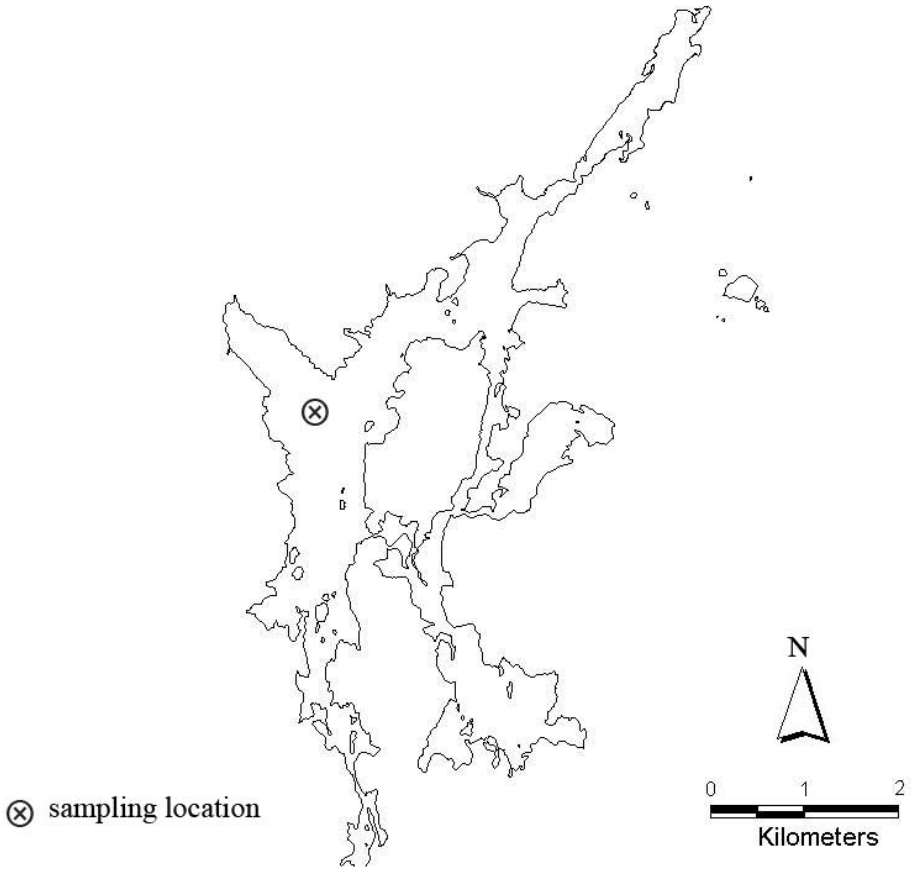
BOB SES # 183

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/01/1981	7.40 V	4.80 V	32.0 V	-0.86 V	1.80 V	0.650 V	1.000 V	0.450 V	0.55 V	10.0 V	N	4.0 V	1.400 V
7/10/1982	7.50 V	5.01 V	31.0 V	-0.51 V	1.90 V	0.680 V	N	N	N	9.5 V	N	4.7 V	N
7/10/1983	7.00 V	4.85 V	30.9 V	-0.64 V	N	N	N	N	N	N	N	N	N
7/25/1984	5.00 V	4.79 V	31.5 V	-0.69 V	1.88 V	0.620 V	0.620 V	0.360 V	0.11 T	9.7 V	9.5 V	N	1.120 V
8/20/1985	5.00 V	5.04 V	29.0 V	-0.03 V	1.72 V	0.570 V	0.600 V	0.440 V	0.15 T	8.5 V	18.5 V	N	1.450 V
7/15/1986	7.00 V	5.08 V	28.5 V	-0.17 V	1.87 V	0.640 V	0.630 V	0.400 V	0.25 V	9.1 V	8.0 V	N	1.480 V
7/30/1987	6.50 V	5.31 V	27.5 V	0.00 V	2.30 V	0.600 V	0.700 V	0.390 V	0.25 V	7.7 V	5.0 V	N	1.160 V
7/13/1988	4.20 V	5.06 V	29.5 V	-0.10 V	2.00 V	0.720 V	0.740 V	0.410 V	0.30 T	9.0 V	8.0 V	N	1.420 V
7/19/1989	5.60 V	4.96 V	29.4 V	-0.29 V	1.90 V	0.620 V	0.720 V	0.390 V	0.20 T	9.1 V	5.0 V	N	1.900 V
7/19/1990	5.00 V	5.00 V	29.3 V	-0.13 V	1.70 V	0.680 V	0.680 V	0.350 V	0.20 T	8.7 V	13.0 V	N	1.500 V
7/08/1991	6.00 V	5.09 V	28.1 V	-0.42 C	1.70 V	0.620 V	0.720 V	0.420 V	0.40 T	8.1 V	7.0 V	N	1.260 V
7/06/1992	5.25 V	5.11 V	28.4 V	-0.24 C	1.85 V	0.640 V	0.810 V	0.360 V	0.50 T	9.2 V	5.0 V	N	1.240 V
7/07/1993	5.80 V	5.11 V	27.0 V	-0.17 V	1.60 V	0.570 V	0.720 V	0.339 V	0.20 T	7.8 V	8.4 V	N	1.340 V
7/04/1994	7.00 V	5.21 V	25.9 V	0.10 V	1.65 V	0.610 V	0.710 V	0.380 V	0.20 T	7.9 V	9.0 V	N	1.280 V
7/12/1995	N	5.02 V	24.0 V	-0.15 C	1.45 V	0.520 V	0.600 V	0.300 V	0.20 W	7.5 V	8.8 V	N	0.880 V
7/08/1996	N	5.02 V	25.0 V	0.50 C	1.65 V	0.560 V	0.680 V	0.300 V	0.40 T	8.0 V	8.6 V	N	1.040 V
7/07/1997	N	5.08 V	22.6 V	-0.09 V	1.40 V	0.505 V	0.600 V	0.245 V	0.15 V	6.7 V	17.6 V	N	1.180 V
7/12/1998	N	5.60 V	21.1 V	0.38 V	1.30 V	0.500 V	0.740 V	0.280 V	0.20 W	6.5 V	N	N	1.020 V
7/13/1999	N	5.78 V	21.7 V	0.39 V	1.35 V	0.540 V	0.720 V	0.270 V	0.20 W	7.0 V	N	N	0.880 V
7/17/2000	N	6.00 V	20.6 V	0.32 V	1.35 V	0.540 V	0.740 V	0.290 V	0.60 T	5.5 V	N	N	1.160 V
7/02/2001	N	5.57 V	21.6 V	0.36 V	1.15 V	0.500 V	0.700 V	0.290 V	0.20 W	6.0 V	N	N	1.160 V
7/09/2002	N	5.25 V	20.3 V	0.10 V	1.20 V	0.445 V	0.650 V	0.235 V	0.18 V	6.1 V	N	N	1.000 V
7/22/2003	3.00 V	5.41 V	24.2 V	0.14 V	1.24 V	0.460 V	0.675 V	0.250 V	0.17 V	5.5 V	N	N	1.040 V
7/12/2004	5.10 V	5.56 V	17.2 V	0.22 V	1.26 V	0.465 V	0.665 V	0.260 V	0.20 V	5.9 V	N	N	1.140 V
7/28/2005	5.90 V	6.05 V	19.0 V	N	1.14 V	0.455 V	0.640 V	0.290 V	0.11 V	5.4 V	9.6 V	N	0.700 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/01/1981	0.1100 V	0.1180 V	0.2300 V	0.0010 L	0.0040 V	0.0080 V	0.0030 V	0.12 V	0.018 V	0.021 C	2.5 V	0.20 V
7/10/1982	0.0850 V	0.1250 V	0.2100 V	0.0030 V	0.0060 V	0.0100 V	N	N	N	N	N	N
7/10/1983	N	N	O	0.0010 V	0.0030 V	0.0060 V	N	N	N	N	N	N
7/25/1984	0.1350 V	0.0940 V	0.1900 V	0.0010 L	0.0050 V	0.0080 V	N	N	N	N	N	N
8/20/1985	O	0.1200 V	0.1500 V	0.0010 V	0.0050 V	0.0090 V	N	N	N	N	N	N
7/15/1986	0.1500 V	0.0890 V	0.1600 V	0.0020 V	0.0040 V	0.0080 V	N	N	N	N	N	N
7/30/1987	0.1400 V	0.0750 V	0.0900 V	0.0010 W	0.0040 V	0.0010 W	N	N	N	N	N	N
7/13/1988	0.1200 V	0.0850 V	0.1700 V	0.0018 T	0.0050 T	0.0093 V	N	N	N	N	2.8 V	N
7/19/1989	0.1800 V	0.0910 V	0.1900 V	0.0019 T	0.0040 T	0.0072 V	N	N	N	N	2.7 V	N
7/19/1990	0.1700 V	0.0890 V	0.2000 V	0.0005 W	0.0050 T	0.0070 V	N	N	N	N	2.8 V	0.20 T
7/08/1991	0.1800 V	0.0870 V	0.1700 V	0.0010 T	0.0040 T	0.0080 V	0.0050 T	0.17 V	0.016 V	0.015 T	2.6 V	0.20 T
7/06/1992	0.1700 V	0.0830 V	0.1600 V	0.0005 W	0.0050 T	0.0100 V	0.0050 T	0.20 V	0.026 V	0.010 T	2.7 V	0.20 W
7/07/1993	0.0850 T	0.0770 V	0.1500 V	0.0008 T	0.0040 T	0.0047 V	0.0020 T	0.18 V	0.012 V	0.025 V	2.7 V	0.40 T
7/04/1994	0.1000 T	0.0760 V	0.1500 V	0.0007 T	0.0050 T	0.0057 V	O	0.18 V	0.034 V	0.030 V	3.2 V	0.60 T
7/12/1995	0.1000 V	0.0800 V	0.1300 V	0.0014 V	0.0035 T	0.0050 V	0.0020 T	0.18 V	0.010 V	0.010 T	3.5 V	0.20 T
7/08/1996	0.1600 V	0.0840 V	0.1600 V	0.0012 V	0.0035 T	0.0055 V	0.0060 T	0.32 V	0.112 V	0.005 W	2.8 V	0.20 W
7/07/1997	0.1940 V	0.0790 V	0.1570 V	0.0008 D	0.0042 V	0.0046 V	0.0070 V*	0.24 V	0.029 V	0.032 V	3.5 V	0.42 V
7/12/1998	0.1710 V	0.0490 V	0.0994 V	0.0008 D	0.0035 V	0.0039 V	0.0040 T	0.20 V	0.002 W	0.005 W	3.5 V	0.20 W
7/13/1999	0.1710 V	0.0395 V	0.0776 V	0.0008 D	0.0020 V	0.0023 V	0.0060 T	0.20 V	0.002 W	0.015 T	3.6 V	0.20 W
7/17/2000	0.1340 V	0.0347 V	0.0725 V	0.0008 D	0.0025 V	0.0035 V	0.0040 T	0.18 V	0.012 V	0.005 W	3.2 V	0.20 W
7/02/2001	0.1990 V	0.0623 V	0.1170 V	0.0008 D	0.0034 V	0.0039 V	0.0080 T	0.24 V	0.022 V	0.007 T	4.0 V	0.40 T
7/09/2002	0.0792 V	0.0772 V	0.0901 V	0.0008 D	0.0029 V	0.0041 V	0.0083 V*	0.21 V	0.040 V	0.018 V	3.0 V	0.20 V
7/22/2003	0.1920 V	0.0480 V	0.1250 V	0.0008 D	0.0016 V	0.0042 V	0.0064 V*	0.21 V	0.022 V	0.002 W	5.2 V	0.48 V
7/12/2004	0.1470 V	0.0337 V	0.1030 V	0.0008 D	0.0015 D	0.0041 V	0.0043 V*	0.16 V	0.012 V	0.004 T	3.4 V	0.34 V
7/28/2005	0.1010 V	0.0192 V	0.0445 V	0.0008 D	0.0018 V	0.0017 V	0.0048 V*	0.19 V	0.010 V	0.002 W	3.1 V	0.34 V

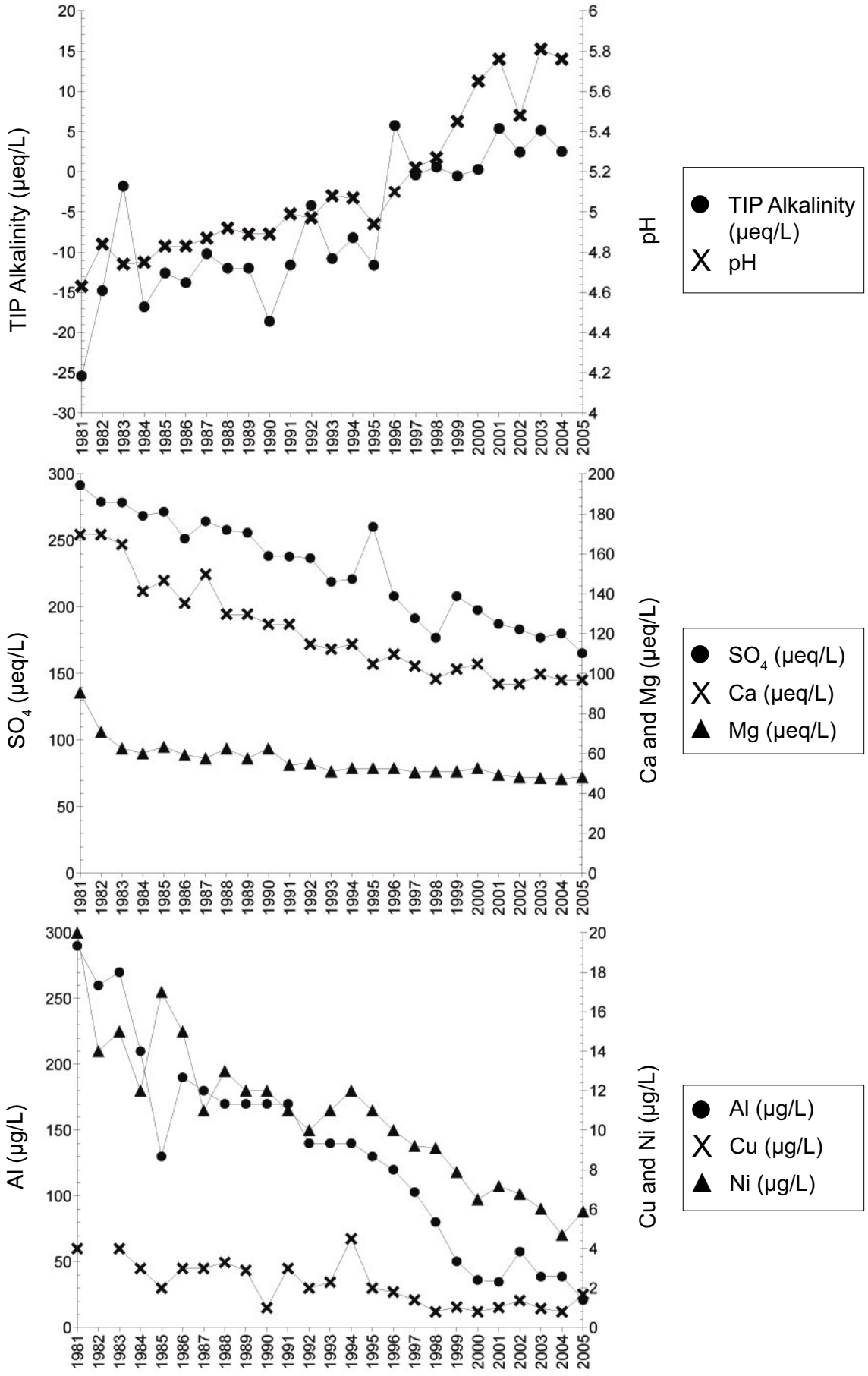
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Chiniguchi Lake



SES ID #	50	**Shoreline length (km)**	81.05
Township	Telfer/McConnell	**Maximum depth (m)**	44.2
Latitude	46°55’	**Mean depth (m)**	13.6
Longitude	80°42’	**Volume (x 10^4 m^3)**	17621
Distance from Sudbury (km)	56	**Area (ha)**	1104.16
Elevation (m)	316	**Road access**	Yes
Watershed code	2DC02		

Chiniguchi Lake



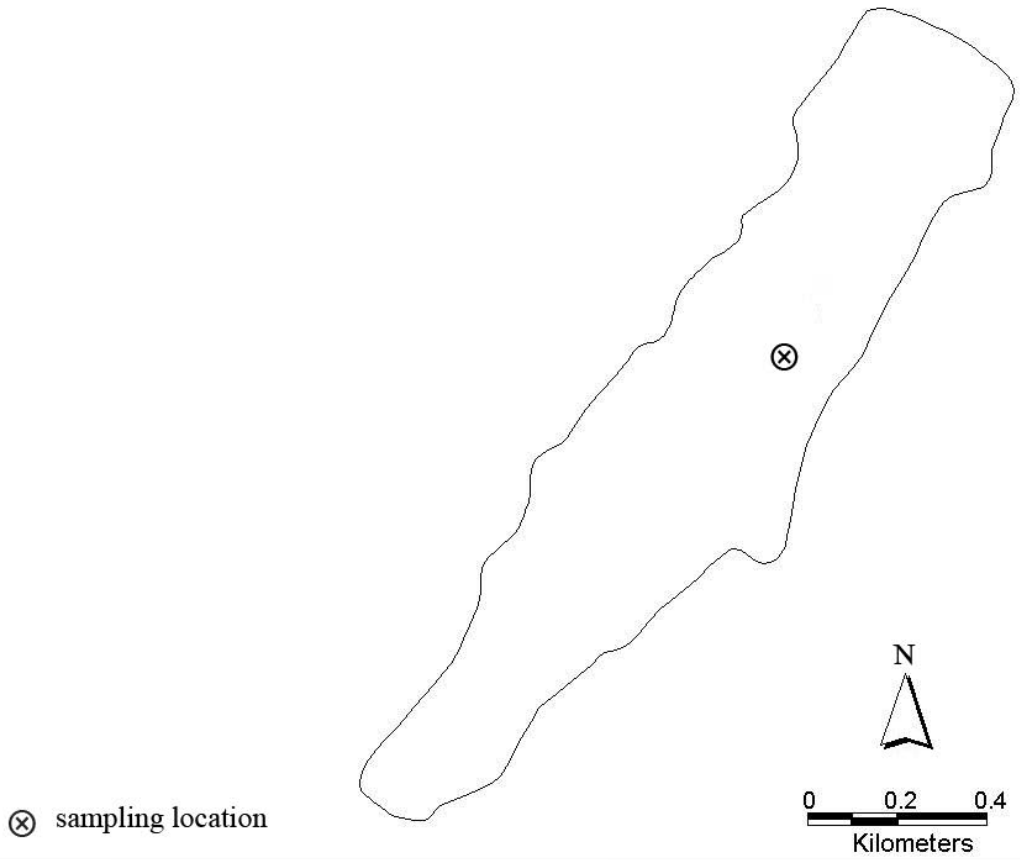
CHINIGUCHI SES # 50

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	10.50 V	4.63 V	47.0 V	-1.27 V	3.40 V	1.100 V	0.800 V	0.500 V	0.55 V	14.0 V	N	0.0 V	0.600 V
7/18/1982	9.00 V	4.84 V	42.0 V	-0.74 V	3.40 V	0.860 V	N	N	N	13.4 V	N	-0.1 T	N
7/12/1983	17.00 V	4.74 V	39.6 V	-0.09 V	3.30 V	0.760 V	0.600 V	0.360 V	0.32 V	13.4 V	N	1.1 V	0.660 V
7/23/1984	15.00 V	4.75 V	41.0 V	-0.84 V	2.83 V	0.730 V	0.640 V	0.330 V	0.22 V	12.9 V	1.0 V	N	0.670 V
8/20/1985	12.00 V	4.83 V	40.0 V	-0.63 V	2.94 V	0.770 V	0.630 V	0.370 V	N	13.1 V	2.0 V	N	N
8/07/1986	16.00 V	4.83 V	39.0 V	-0.69 V	2.71 V	0.720 V	0.600 V	0.350 V	0.25 V	12.1 V	0.5 T	N	0.640 V
7/16/1987	20.00 V	4.87 V	38.0 V	-0.51 V	3.00 V	0.700 V	0.700 V	0.310 V	0.25 V	12.7 V	0.5 W	N	0.620 V
7/21/1988	18.00 V	4.92 V	37.5 V	-0.60 V	2.60 V	0.760 V	0.680 V	0.360 V	O	12.4 V	1.5 T	N	0.480 V
7/18/1989	12.90 V	4.89 V	36.4 V	-0.60 V	2.60 V	0.700 V	0.680 V	0.340 V	0.20 W	12.3 V	0.5 T	N	0.720 V
7/18/1990	16.20 V	4.89 V	36.0 V	-0.93 V	2.50 V	0.760 V	0.700 V	0.340 V	0.30 T	11.5 V	0.5 T	N	0.620 V
7/10/1991	20.00 V	4.99 V	34.7 V	-0.58 C	2.50 V	0.660 V	0.760 V	0.340 V	0.20 W	11.4 V	0.5 T	N	0.600 V
7/14/1992	17.50 V	4.97 V	34.0 V	-0.21 C	2.30 V	0.670 V	0.650 V	0.291 V	0.20 T	11.4 V	0.5 T	N	0.580 V
7/13/1993	14.50 V	5.08 V	33.0 V	-0.54 V	2.25 V	0.620 V	0.650 V	0.304 V	0.20 W	10.5 V	0.2 W	N	0.620 V
7/25/1994	15.50 V	5.07 V	31.8 V	-0.41 V	2.30 V	0.640 V	0.670 V	0.308 V	0.20 W	10.6 V	0.4 T	N	0.600 V
7/10/1995	N	4.94 V	31.0 V	-0.58 C	2.10 V	0.640 V	0.680 V	0.310 V	0.40 T	12.5 V	0.4 T	N	0.680 V
7/08/1996	N	5.10 V	30.0 V	0.29 C	2.20 V	0.640 V	0.720 V	0.320 V	0.20 W	10.0 V	0.8 T	N	0.700 V
7/15/1997	N	5.22 V	29.3 V	-0.02 V	2.08 V	0.615 V	0.645 V	0.275 V	0.29 V	9.2 V	1.2 V	N	0.800 V
7/12/1998	N	5.27 V	28.1 V	0.03 V	1.95 V	0.620 V	0.720 V	0.310 V	0.20 W	8.5 V	N	N	0.760 V
7/14/1999	N	5.45 V	29.0 V	-0.03 V	2.05 V	0.620 V	0.680 V	0.300 V	0.20 W	10.0 V	N	N	0.680 V
7/17/2000	N	5.65 V	27.5 V	0.01 V	2.10 V	0.640 V	0.700 V	0.310 V	0.40 T	9.5 V	N	N	0.600 V
7/02/2001	N	5.76 V	27.8 V	0.27 V	1.90 V	0.600 V	0.700 V	0.310 V	0.20 W	9.0 V	N	N	0.560 V
7/09/2002	N	5.48 V	27.2 V	0.12 V	1.90 V	0.585 V	0.690 V	0.275 V	0.24 V	8.8 V	N	N	0.660 V
7/17/2003	10.00 V	5.81 V	24.2 V	0.26 V	2.00 V	0.580 V	0.675 V	0.290 V	0.24 V	8.5 V	N	N	0.640 V
7/12/2004	12.60 V	5.76 V	23.8 V	0.13 V	1.94 V	0.575 V	0.685 V	0.285 V	0.26 V	8.7 V	N	N	0.800 V
7/05/2005	11.25 V	O	24.0 V	N	1.94 V	0.585 V	0.700 V	0.330 V	0.22 V	8.0 V	N	N	0.700 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0300 V	0.2120 V	0.2900 V	0.0040 V	0.0200 V	0.0150 V	0.0040 V	0.09 V	0.022 V	0.091 C	0.7 V	0.40 V
7/18/1982	0.0250 T	0.2110 V	0.2600 V	O	0.0140 V	0.0170 V	N	N	N	N	N	N
7/12/1983	0.0300 V	0.1850 V	0.2700 V	0.0040 V	0.0150 V	0.0110 V	N	N	N	N	N	N
7/23/1984	0.0400 T	0.1800 V	0.2100 V	0.0030 V	0.0120 V	0.0100 V	N	N	N	N	N	N
8/20/1985	0.0370 V	0.2000 V	0.1300 V	0.0020 V	0.0170 V	0.0120 V	N	N	N	N	N	N
8/07/1986	0.0280 V	0.1600 V	0.1900 V	0.0030 V	0.0150 V	0.0090 V	N	N	N	N	N	N
7/16/1987	0.0220 V	0.1400 V	0.1800 V	0.0030 V	0.0110 V	0.0080 V	N	N	N	N	N	N
7/21/1988	0.0270 T	0.1500 V	0.1700 V	0.0033 V	0.0130 V	0.0073 V	N	N	N	N	0.9 V	N
7/18/1989	0.0370 T	0.1400 V	0.1700 V	0.0029 V	0.0120 V	0.0077 V	N	N	N	N	0.5 V	N
7/18/1990	0.0300 T	0.1300 V	0.1700 V	0.0010 T	0.0120 V	0.0080 V	N	N	N	N	0.3 T	0.20 T
7/10/1991	0.0400 T	0.1300 V	0.1700 V	0.0030 V	0.0110 V	0.0070 V	0.0020 W	0.09 T	0.024 V	0.070 V	1.0 V	0.20 W
7/14/1992	0.0200 W	0.1200 V	0.1400 V	0.0020 T	0.0100 T	0.0070 V	0.0040 T	0.10 V	0.012 V	0.070 V	0.5 V	0.20 W
7/13/1993	0.0220 T	0.1000 V	0.1400 V	0.0023 T	0.0110 V	0.0053 V	0.0040 T	0.08 T	0.010 V	0.055 V	0.7 V	0.20 T
7/25/1994	0.0220 T	0.1200 V	0.1400 V	0.0045 V	0.0120 V	0.0071 V	0.0020 T	0.10 V	0.024 V	0.060 V	0.6 V	0.20 W
7/10/1995	0.0200 W	0.1000 V	0.1300 V	0.0020 V	0.0110 V	0.0060 V	O	0.56 V	0.006 T	0.065 V	0.5 V	0.20 W
7/08/1996	0.0400 T	0.0940 V	0.1200 V	0.0018 V	0.0100 V	0.0060 V	0.0020 W	0.12 V	0.016 V	0.005 W	0.9 V	0.20 W
7/15/1997	0.0214 V	0.0854 V	0.1030 V	0.0014 V	0.0092 V	0.0049 V	0.0016 V*	0.12 V	0.012 V	0.076 V	0.8 V	0.16 V
7/12/1998	0.0140 V	0.0755 V	0.0802 V	0.0008 D	0.0091 V	0.0047 V	0.0040 T	0.08 T	0.016 V	0.060 V	0.6 V	0.20 W
7/14/1999	0.0105 V	0.0725 V	0.0503 V	0.0010 V	0.0079 V	0.0046 V	0.0020 W	0.06 T	0.012 V	0.070 V	0.8 V	0.40 T
7/17/2000	0.0127 V	0.0604 V	0.0362 V	0.0008 D	0.0065 V	0.0043 V	0.0020 W	0.08 T	0.014 V	0.061 V	0.8 V	0.20 W
7/02/2001	0.0100 V	0.0710 V	0.0347 V	0.0010 V	0.0072 V	0.0035 V	0.0080 T	0.10 V	0.012 V	0.015 T	1.1 V	0.20 W
7/09/2002	0.0132 V	0.0724 V	0.0577 V	0.0014 V	0.0068 V	0.0039 V	0.0023 V*	0.10 V	0.016 V	0.030 V	0.9 V	O
7/17/2003	0.0154 V	0.0732 V	0.0387 V	0.0010 V	0.0060 V	0.0071 V	0.0015 V*	0.15 V	0.018 V	0.018 V	1.8 V	0.24 V
7/12/2004	0.0131 V	0.0605 V	0.0388 V	0.0008 D	0.0047 V	0.0030 V	0.0024 V*	0.22 V	0.010 V	0.016 V	1.5 V	0.26 V
7/05/2005	0.0110 V	0.0438 V	0.0209 V	0.0017 V	0.0059 V	0.0045 V	0.0037 V*	0.22 V	N	N	1.3 V	0.64 V

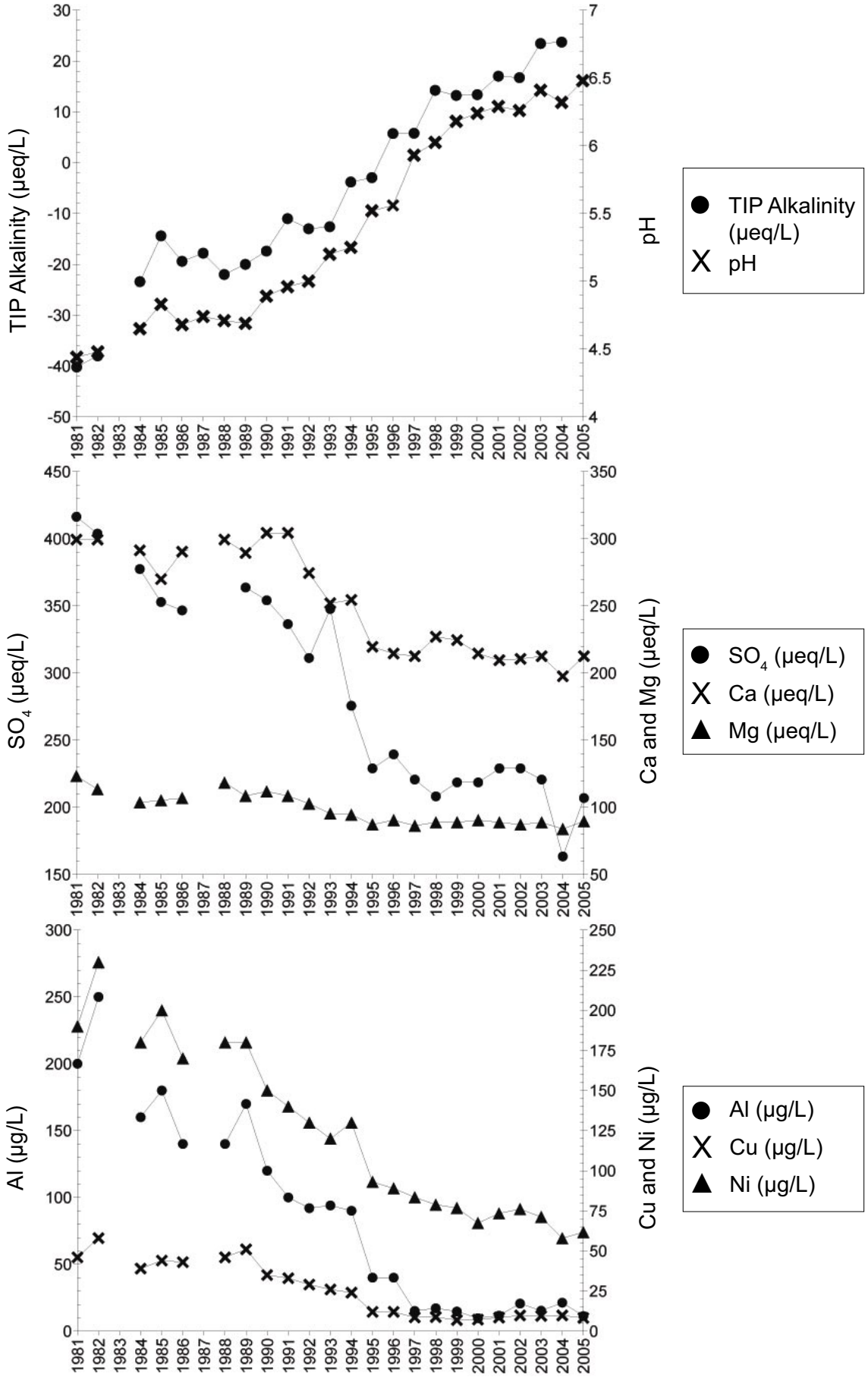
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Clearwater Lake



SES ID #	13	**Shoreline length (km)**	4.97
Township	Broder	**Maximum depth (m)**	21.5
Latitude	46°22’	**Mean depth (m)**	8.4
Longitude	81°03’	**Volume (x 10^4 m^3)**	642
Distance from Sudbury (km)	12	**Area (ha)**	75.86
Elevation (m)	267	**Road access**	Yes
Watershed code	2CF05		

Clearwater Lake



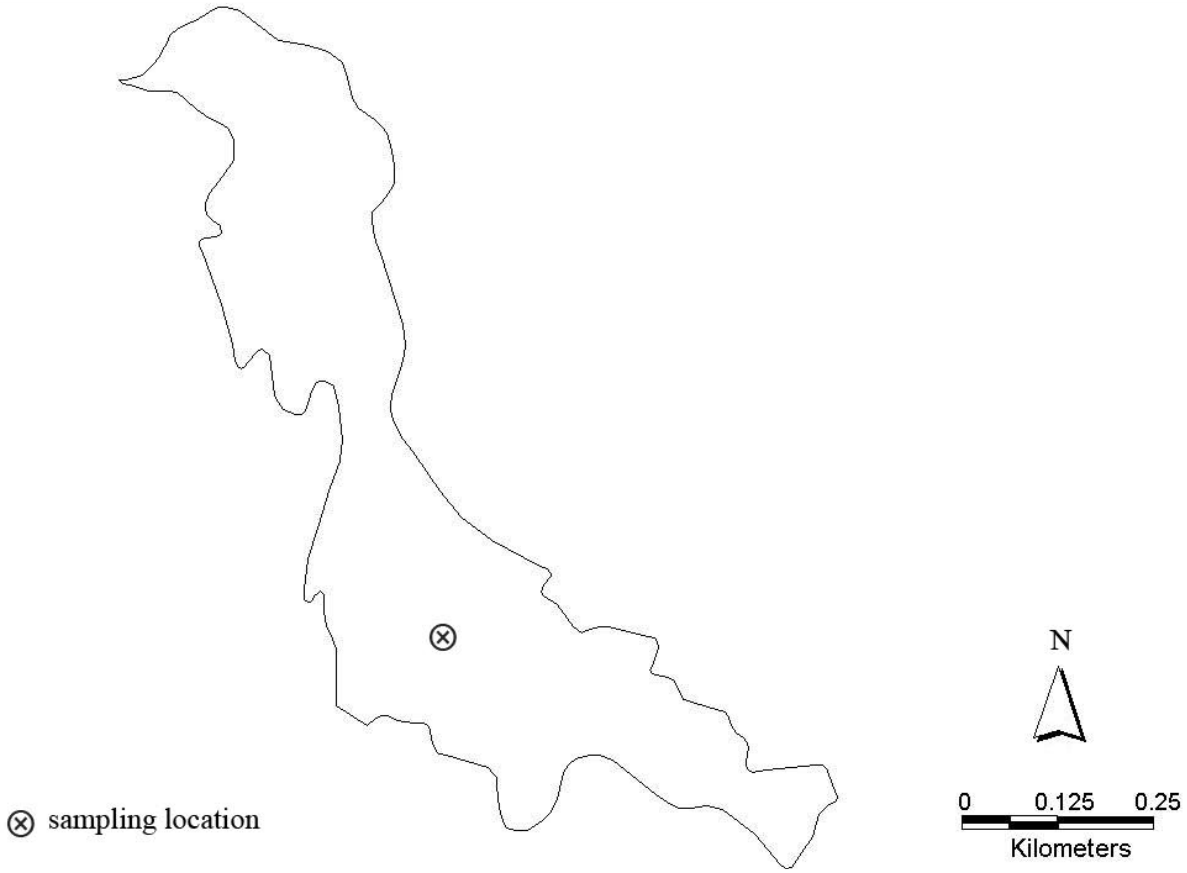
CLEARWATER SES # 13

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/04/1981	11.30 V	4.44 V	81.0 V	-2.01 V	6.00 V	1.500 V	2.000 V	0.550 V	5.65 V	20.0 V	N	2.7 V	1.350 V
7/27/1982	9.50 V	4.48 V	78.0 V	-1.90 V	6.00 V	1.380 V	N	N	N	19.4 V	N	-0.4 T	N
7/10/1983	N	N	N	N	N	N	N	N	N	N	N	N	N
8/10/1984	8.00 V	4.65 V	68.0 V	-1.17 V	5.84 V	1.260 V	2.220 V	0.580 V	7.04 V	18.1 V	1.5 V	N	0.850 V
7/11/1985	10.50 V	4.83 V	74.0 V	-0.72 V	5.41 V	1.280 V	2.150 V	0.680 V	6.69 V	17.0 V	1.0 T	N	0.830 V
7/03/1986	9.00 V	4.68 V	80.0 V	-0.97 V	5.82 V	1.300 V	2.470 V	0.570 V	7.80 V	16.7 V	0.5 T	N	0.680 V
8/04/1987	7.20 V	4.74 V	78.5 V	-0.89 V	N	N	N	N	N	N	N	N	N
7/07/1988	7.20 V	4.71 V	87.0 V	-1.10 V	6.00 V	1.440 V	2.840 V	0.600 V	8.80 V	O	1.5 T	N	0.720 V
6/27/1989	6.30 V	4.69 V	83.2 V	-1.00 V	5.80 V	1.320 V	2.860 V	0.680 V	8.10 V	17.5 V	1.5 T	N	1.040 V
7/24/1990	8.70 V	4.89 V	81.7 V	-0.87 V	6.10 V	1.360 V	3.120 V	0.690 V	10.20 V	17.0 V	1.5 T	N	0.720 V
7/15/1991	13.60 V	4.96 V	78.5 V	-0.55 C	6.10 V	1.320 V	3.160 V	0.670 V	9.70 V	16.2 V	0.5 T	N	0.540 V
6/30/1992	9.80 V	5.00 V	75.5 V	-0.65 C	5.50 V	1.250 V	3.190 V	0.620 V	9.40 V	15.0 V	1.0 T	N	0.620 V
6/28/1993	4.90 V	5.20 V	70.5 V	-0.63 V	5.05 V	1.160 V	3.070 V	0.594 V	9.00 V	16.7 V	2.8 V	N	0.700 V
7/06/1994	5.20 V	5.25 V	67.5 V	-0.19 V	5.10 V	1.150 V	3.130 V	0.603 V	8.50 V	13.2 V	2.0 V	N	0.680 V
7/18/1995	8.50 V	5.52 V	62.0 V	-0.15 C	4.40 V	1.060 V	3.040 V	0.620 V	8.00 V	11.0 V	5.4 V	N	0.580 V
7/02/1996	N	5.56 V	61.0 V	0.29 C	4.30 V	1.100 V	3.400 V	0.620 V	8.00 V	11.5 V	3.2 V	N	0.960 V
7/14/1997	N	5.93 V	59.2 V	0.29 V	4.26 V	1.050 V	3.180 V	0.565 V	7.73 V	10.6 V	3.4 V	N	0.860 V
7/06/1998	N	6.02 V	60.3 V	0.71 V	4.55 V	1.080 V	3.240 V	0.570 V	8.00 V	10.0 V	N	N	0.960 V
7/21/1999	8.75 V	6.18 V	60.3 V	0.66 V	4.50 V	1.080 V	3.140 V	0.590 V	8.00 V	10.5 V	N	N	1.080 V
7/10/2000	9.80 V	6.24 V	59.4 V	0.67 V	4.30 V	1.100 V	3.360 V	0.600 V	7.80 V	10.5 V	N	N	0.960 V
7/10/2001	7.00 V	6.29 V	60.6 V	0.85 V	4.20 V	1.080 V	3.680 V	0.630 V	8.20 V	11.0 V	N	N	1.120 V
7/15/2002	6.00 V	6.26 V	58.9 V	0.84 V	4.22 V	1.060 V	3.580 V	0.505 V	8.00 V	11.0 V	N	N	1.140 V
7/21/2003	5.50 V	6.41 V	62.8 V	1.17 V	4.26 V	1.080 V	4.060 V	0.585 V	O	10.6 V	N	N	1.080 V
7/21/2004	5.10 V	6.32 V	59.8 V	1.19 V	3.96 V	1.020 V	4.220 V	0.555 V	8.58 V	7.9 V	N	N	1.240 V
7/13/2005	7.00 V	6.48 V	68.6 V	N	4.26 V	1.090 V	5.150 V	0.545 V	9.53 V	10.0 V	4.2 V	N	1.080 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/04/1981	0.0400 V	0.2860 V	0.2000 V	0.0460 V	0.1900 V	0.0280 V	0.0080 V	0.06 V	0.014 V	0.006 C	0.4 V	0.40 V
7/27/1982	0.0300 T	0.2790 V	0.2500 V	0.0580 V	0.2300 V	0.0350 V	N	N	N	N	N	N
7/10/1983	N	N	N	N	N	N	N	N	N	N	N	N
8/10/1984	0.0750 V	0.2300 V	0.1600 V	0.0390 V	0.1800 V	0.0330 V	N	N	N	N	N	N
7/11/1985	0.0710 V	0.2600 V	0.1800 V	0.0440 V	0.2000 V	0.0340 V	N	N	N	N	N	N
7/03/1986	0.0410 V	0.2300 V	0.1400 V	0.0430 V	0.1700 V	0.0290 V	N	N	N	N	N	N
8/04/1987	N	N	N	N	N	N	N	N	N	N	N	N
7/07/1988	0.0450 T	0.2700 V	0.1400 V	0.0460 V	0.1800 V	0.0250 V	N	N	N	N	0.7 V	N
6/27/1989	0.0940 T	0.2800 V	0.1700 V	0.0510 V	0.1800 V	0.0270 V	N	N	N	N	1.0 V	N
7/24/1990	0.0600 T	0.2600 V	0.1200 V	0.0350 V	0.1500 V	0.0340 V	N	N	N	N	0.8 V	0.40 T
7/15/1991	0.0400 T	0.2400 V	0.1000 T	0.0330 V	0.1400 V	0.0220 V	0.0020 W	0.11 V	0.016 V	0.005 T	0.8 V	0.20 W
6/30/1992	0.0570 T	0.2100 V	0.0920 T	0.0290 V	0.1300 V	0.0200 V	0.0030 T	0.14 V	0.034 V	0.045 V	0.7 V	0.60 T
6/28/1993	0.0960 T	0.1800 V	0.0940 T	0.0260 V	0.1200 V	0.0190 V	0.0040 T	0.16 V	0.028 V	0.065 V	1.1 V	0.20 T
7/06/1994	0.0830 T	0.1900 V	0.0900 T	0.0240 V	0.1300 V	0.0200 V	0.0080 T	0.18 V	0.022 V	0.040 V	1.6 V	0.20 W
7/18/1995	0.0200 V	0.1200 V	0.0400 V	0.0120 V	0.0930 V	0.0160 V	0.0020 T	0.16 V	0.028 V	0.020 T	1.7 V	0.20 T
7/02/1996	0.0400 T	0.0950 V	0.0400 T	0.0120 V	0.0890 V	0.0140 V	0.0060 T	0.20 V	0.028 V	0.030 V	1.7 V	0.20 W
7/14/1997	0.0190 V	0.0725 V	0.0151 V	0.0086 V	0.0835 V	0.0116 V	0.0012 V*	0.20 V	0.032 V	0.036 V	1.7 V	0.28 V
7/06/1998	0.0180 V	0.0531 V	0.0171 V	0.0088 V	0.0788 V	0.0117 V	0.0040 T	0.20 V	0.010 V	0.005 W	2.0 V	0.40 T
7/21/1999	0.0359 V	0.0393 V	0.0147 V	0.0069 V	0.0768 V	0.0103 V	0.0040 T	0.18 V	0.004 T	0.005 W	2.2 V	0.60 T
7/10/2000	0.0162 V	0.0299 V	0.0097 V	0.0072 V	0.0674 V	0.0092 V	0.0040 T	0.20 V	0.020 V	0.005 W	2.7 V	1.00 V
7/10/2001	0.0104 V	0.0325 V	0.0116 V	0.0085 V	0.0734 V	0.0103 V	O	0.40 V	0.008 T	0.005 W	2.2 V	0.60 T
7/15/2002	0.0237 V	0.0345 V	0.0206 V	0.0098 V	0.0761 V	0.0119 V	0.0033 V*	0.19 V	0.030 V	0.004 T	2.4 V	0.28 V
7/2 1/2003	0.0143 V	0.0244 V	0.0153 V	0.0095 V	0.0712 V	0.0132 V	0.0034 V*	0.24 V	0.034 V	0.004 T	2.9 V	0.24 V
7/21/2004	0.0250 V	0.0181 V	0.0213 V	0.0098 V	0.0579 V	0.0086 V	0.0038 V*	0.27 V	0.002 W	0.002 W	2.9 V	0.36 V
7/13/2005	0.0111 V	0.0164 V	0.0113 V	0.0082 V	0.0617 V	0.0096 V	0.0029 V*	0.17 V	0.002 W	0.006 T	2.9 V	0.38 V

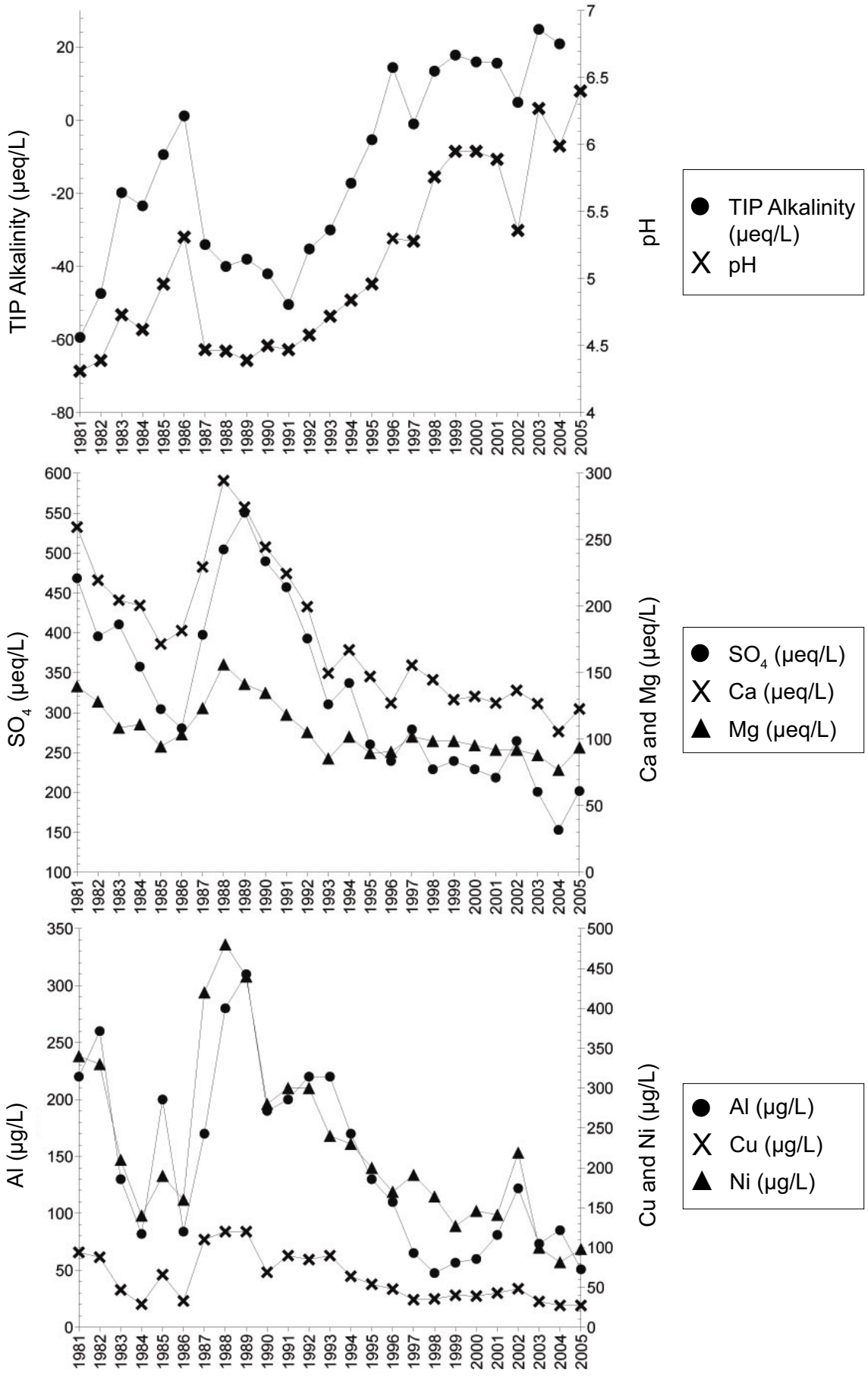
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Crooked Lake



SES ID #	226	**Shoreline length (km)**	3.89
Township	Broder	**Maximum depth (m)**	8.0
Latitude	46°25’	**Mean depth (m)**	3.8
Longitude	81°02’	**Volume (x 10^4 m^3)**	102
Distance from Sudbury (km)	10	**Area (ha)**	26.29
Elevation (m)	260	**Road access**	Yes
Watershed code	2CF05		

Crooked Lake



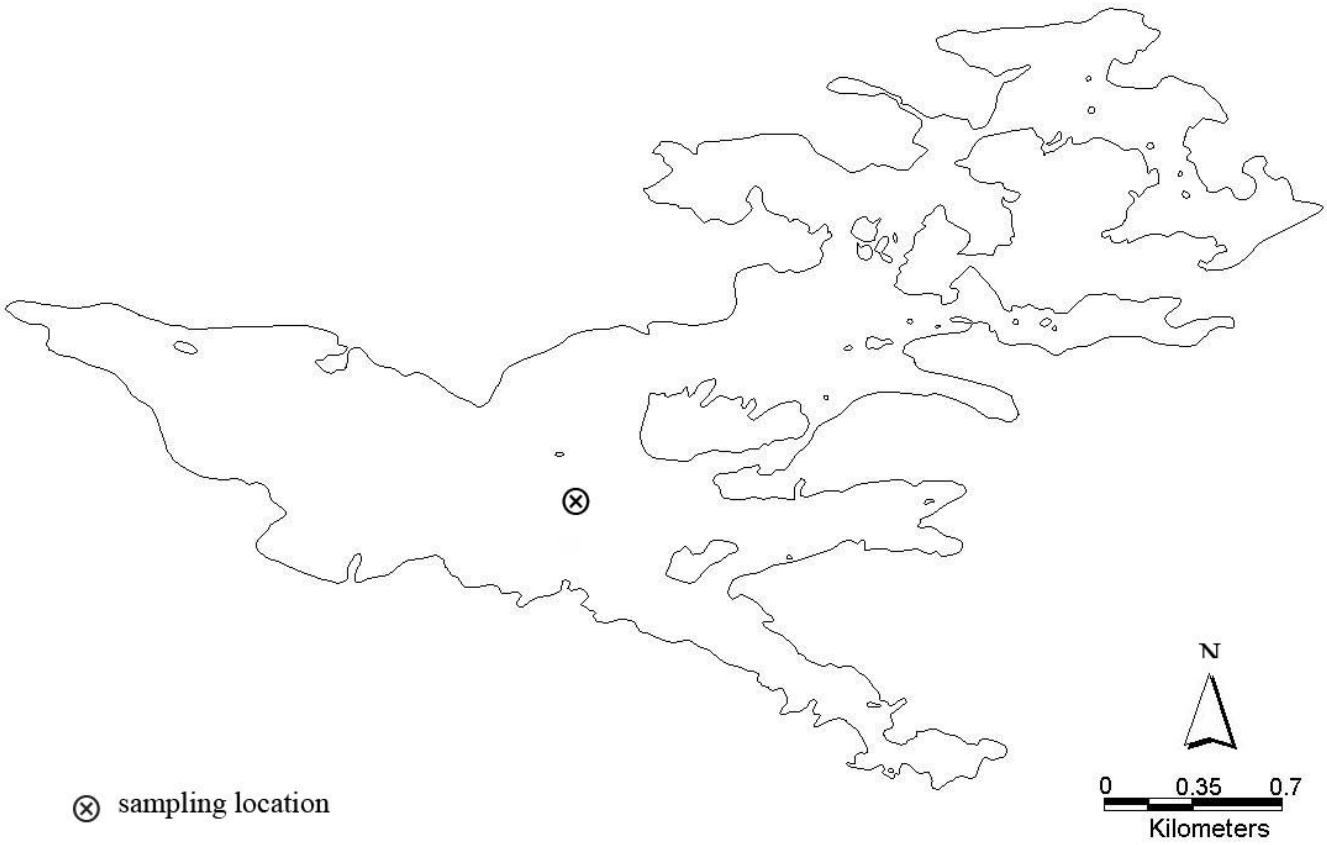
CROOKED SES # 226

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/04/1981	5.10 V	4.31 V	73.0 V	-2.97 V	5.20 V	1.700 V	1.800 V	0.700 V	2.85 V	22.5 V	N	9.5 V	2.100 V
8/03/1982	3.80 V	4.39 V	78.0 V	-2.37 V	4.40 V	1.560 V	N	N	N	19.0 V	N	6.8 V	N
8/25/1983	3.70 V	4.73 V	62.0 V	-0.99 V	4.10 V	1.320 V	1.600 V	0.680 V	2.87 V	19.7 V	N	20.0 V	2.110 V
8/10/1984	4.00 V	4.62 V	68.0 V	-1.17 V	4.02 V	1.350 V	1.640 V	0.670 V	3.06 V	17.2 V	18.0 V	N	1.870 V
7/11/1985	2.50 V	4.96 V	53.0 V	-0.47 V	3.44 V	1.150 V	1.490 V	0.700 V	3.34 V	14.6 V	48.0 V	N	2.660 V
8/14/1986	4.10 V	5.31 V	50.0 V	0.06 V	3.64 V	1.260 V	1.660 V	0.800 V	3.35 V	13.5 V	12.5 V	N	1.860 V
7/24/1987	5.00 V	4.47 V	66.0 V	-1.70 V	4.60 V	1.500 V	1.740 V	0.750 V	3.65 V	19.1 V	2.5 V	N	2.380 V
7/06/1988	6.00 V	4.46 V	90.0 V	-2.00 V	5.90 V	1.900 V	2.020 V	0.760 V	4.00 V	24.2 V	5.0 V	N	1.840 V
6/27/1989	4.50 V	4.39 V	89.5 V	-1.90 V	5.50 V	1.720 V	1.840 V	0.830 V	3.30 V	26.5 V	4.5 V	N	1.960 V
7/24/1990	5.60 V	4.50 V	78.0 V	-2.10 V	4.90 V	1.640 V	2.150 V	0.860 V	4.00 V	23.5 V	3.0 V	N	2.280 V
7/15/1991	5.10 V	4.47 V	79.0 V	-2.52 C	4.50 V	1.440 V	1.820 V	0.740 V	3.40 V	22.0 V	3.0 V	N	1.880 V
6/30/1992	3.10 V	4.58 V	68.5 V	-1.76 C	4.00 V	1.280 V	1.770 V	0.730 V	3.50 V	18.9 V	6.0 V	N	1.720 V
6/29/1993	2.40 V	4.72 V	57.5 V	-1.50 V	3.00 V	1.040 V	1.680 V	0.699 V	3.10 V	14.9 V	18.4 V	N	2.140 V
6/29/1994	3.90 V	4.84 V	56.0 V	-0.86 V	3.35 V	1.240 V	1.790 V	0.759 V	2.80 V	16.2 V	8.6 V	N	1.380 V
6/26/1995	N	4.96 V	46.1 V	-0.27 C	2.95 V	1.090 V	1.810 V	0.659 V	2.80 V	12.5 V	13.0 V	N	1.000 V
7/02/1996	N	5.30 V	46.0 V	0.72 C	2.55 V	1.100 V	2.160 V	0.970 V	O	11.5 V	21.2 V	N	1.200 V
7/02/1997	N	5.28 V	48.1 V	-0.05 V	3.12 V	1.240 V	1.810 V	0.680 V	2.52 V	13.4 V	10.0 V	N	1.600 V
7/07/1998	N	5.76 V	44.1 V	0.67 V	2.90 V	1.200 V	1.800 V	0.630 V	2.40 V	11.0 V	N	N	1.140 V
7/13/1999	N	5.95 V	42.8 V	0.89 V	2.60 V	1.200 V	1.840 V	0.630 V	2.20 V	11.5 V	N	N	0.720 V
7/05/2000	N	5.95 V	42.4 V	0.80 V	2.65 V	1.160 V	1.740 V	0.720 V	2.20 V	11.0 V	N	N	0.680 V
7/09/2001	N	5.89 V	42.5 V	0.78 V	2.55 V	1.120 V	1.880 V	0.700 V	2.60 V	10.5 V	N	N	1.380 V
7/09/2002	N	5.36 V	42.9 V	0.25 V	2.74 V	1.120 V	1.790 V	0.515 V	2.14 V	12.7 V	N	N	1.080 V
7/31/2003	3.50 V	6.27 V	O	1.24 V	2.54 V	1.070 V	1.920 V	0.705 V	2.60 V	9.7 V	N	N	0.560 V
7/05/2004	2.50 V	5.99 V	33.6 V	1.05 V	2.12 V	0.935 V	1.730 V	0.680 V	1.91 V	7.4 V	N	N	1.580 V
7/19/2005	3.25 V	6.40 V	39.2 V	N	2.46 V	1.140 V	1.950 V	0.745 V	2.58 V	9.7 V	N	N	1.080 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/04/1981	0.2300 V	0.1820 V	0.2200 V	0.0940 V	0.3400 V	0.0310 V	0.0050 V	0.19 V	0.054 V	0.006 C	0.8 V	0.60 V
8/03/1982	0.2700 V	0.1890 V	0.2600 V	0.0880 V	0.3300 V	0.0400 V	N	N	N	N	N	N
8/25/1983	0.9500 V	0.1560 V	0.1300 V	0.0470 V	0.2100 V	0.0220 V	N	N	N	N	N	N
8/10/1984	0.8750 V	0.1480 V	0.0820 V	0.0290 V	0.1400 V	0.0170 V	N	N	N	N	N	N
7/11/1985	1.2000 V	0.1400 V	0.2000 V	0.0660 V	0.1900 V	0.0220 V	N	N	N	N	N	N
8/14/1986	0.5300 V	0.1200 V	0.0840 V	0.0330 V	0.1600 V	0.0370 V	N	N	N	N	N	N
7/24/1987	0.1600 V	0.1700 V	0.1700 V	0.1100 V	0.4200 V	0.0110 V	N	N	N	N	N	N
7/06/1988	0.2800 V	0.2000 V	0.2800 V	0.1200 V	0.4800 V	0.0420 V	N	N	N	N	1.1 V	N
6/27/1989	0.3600 V	0.2000 V	0.3100 V	0.1200 V	0.4400 V	0.0430 V	N	N	N	N	1.2 V	N
7/24/1990	0.5100 V	0.1600 V	0.1900 V	0.0690 V	0.2800 V	0.0400 V	N	N	N	N	0.6 V	0.60 T
7/15/1991	0.1600 V	0.1500 V	0.2000 V	0.0900 V	0.3000 V	0.0320 V	0.0060 T	0.19 V	0.048 V	0.020 T	0.6 V	0.20 W
6/30/1992	0.2700 V	0.1300 V	0.2200 V	0.0850 V	0.3000 V	0.0270 V	0.0080 T	0.29 V	0.088 V	0.030 V	1.3 V	0.60 T
6/29/1993	0.3900 V	0.0980 V	0.2200 V	0.0900 V	0.2400 V	0.0240 V	0.0120 V	0.34 V	0.062 V	0.035 V	2.4 V	0.40 T
6/29/1994	0.3900 V	0.1300 V	0.1700 V	0.0640 V	0.2300 V	0.0230 V	0.0100 V	0.30 V	0.090 V	0.005 W	1.9 V	0.40 T
6/26/1995	0.2600 V	0.1100 V	0.1300 V	0.0540 V	0.2000 V	0.0230 V	0.0080 T	0.34 V	0.026 V	0.015 T	3.4 V	0.20 W
7/02/1996	0.5000 V	0.1100 V	0.1100 V	0.0480 V	0.1700 V	0.0260 V	0.0120 V	0.56 V	0.086 V	0.005 W	4.1 V	0.20 W
7/02/1997	0.1050 V	0.0956 V	0.0652 V	0.0346 V	0.1910 V	0.0240 V	0.0139 V*	0.24 V	0.017 V	0.002 W	2.7 V	0.28 V
7/07/1998	0.1640 V	0.0822 V	0.0476 V	0.0356 V	0.1640 V	0.0151 V	0.0100 V	0.32 V	0.002 W	0.005 W	6.1 V	0.20 W
7/13/1999	0.3050 V	0.0531 V	0.0567 V	0.0401 V	0.1270 V	0.0112 V	0.0120 V	0.38 V	0.004 T	0.015 T	5.3 V	0.40 T
7/05/2000	0.3320 V	0.0687 V	0.0600 V	0.0392 V	0.1460 V	0.0134 V	0.0080 T	0.36 V	0.004 T	0.005 W	5.4 V	0.20 W
7/09/2001	0.4310 V	0.0592 V	0.0811 V	0.0430 V	0.1410 V	0.0130 V	0.0120 V	0.32 V	0.002 W	0.010 T	5.5 V	0.20 W
7/09/2002	0.5050 V	0.1270 V	0.1220 V	0.0484 V	0.2190 V	0.0213 V	0.0135 V*	0.32 V	0.048 V	0.008 T	3.8 V	0.20 V
7/31/2003	0.5160 V	0.0384 V	0.0734 V	0.0324 V	0.1000 V	0.0098 V	0.0139 V*	0.33 V	0.042 V	0.006 T	5.0 V	0.40 V
7/05/2004	0.4370 V	0.0309 V	0.0852 V	0.0274 V	0.0817 V	0.0078 V	0.0165 V*	0.27 V	0.016 V	0.010 V	5.6 V	0.54 V
7/19/2005	0.3510 V	0.0294 V	0.0509 V	0.0274 V	0.0981 V	0.0091 V	0.0099 V*	0.31 V	0.002 W	0.006 T	5.3 V	0.46 V

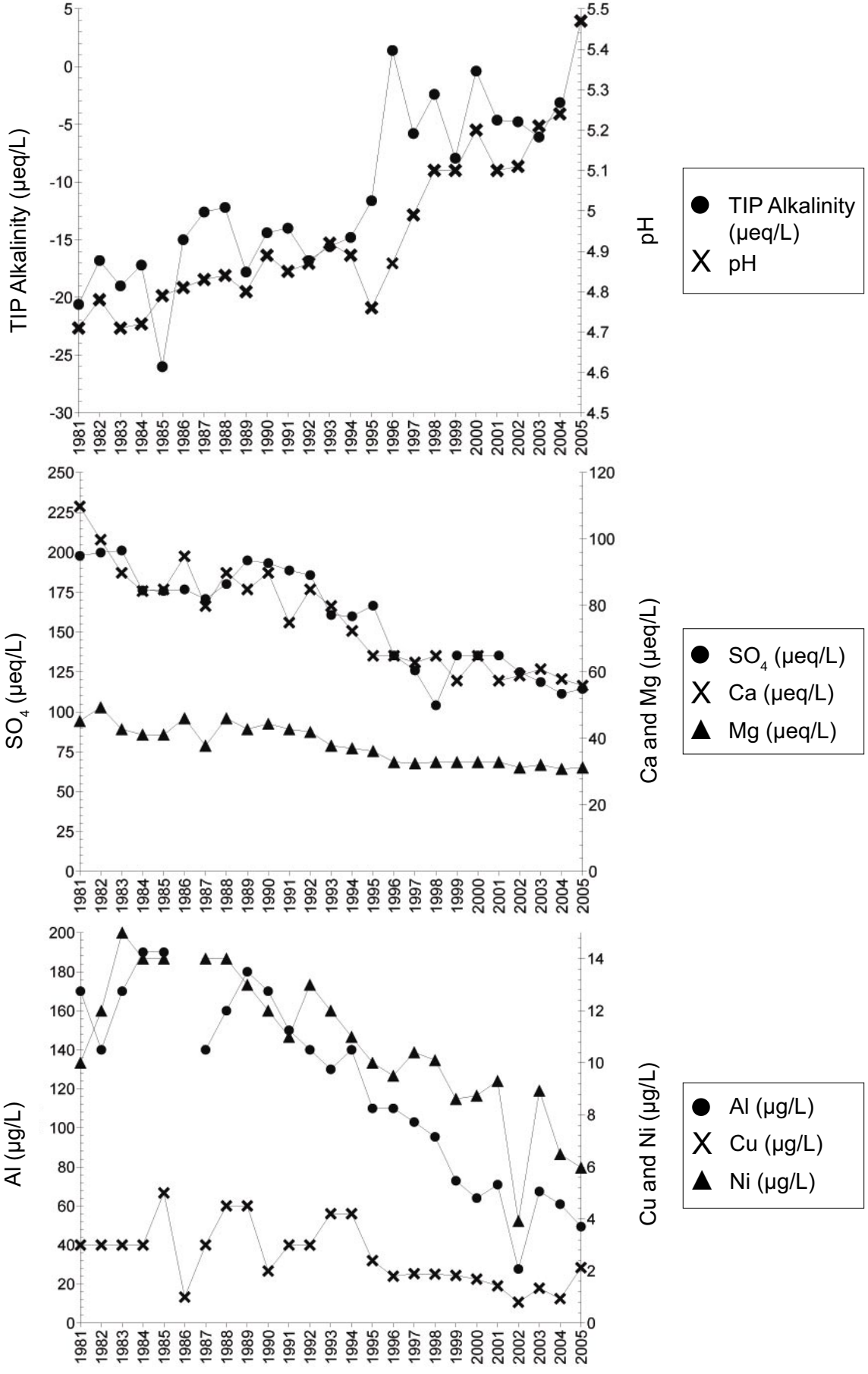
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

David Lake



SES ID #	214	**Shoreline length (km)**	32.52
Township	Goschen/Hansen	**Maximum depth (m)**	24.4
Latitude	46°08’	**Mean depth (m)**	7.3
Longitude	81°17’	**Volume (x 10^4 m^3)**	2356
Distance from Sudbury (km)	42	**Area (ha)**	406.15
Elevation (m)	237	**Road access**	No
Watershed code	2CF03		

David Lake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pH
TIP Alkalinity (µeq/L)
pH
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SO_4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

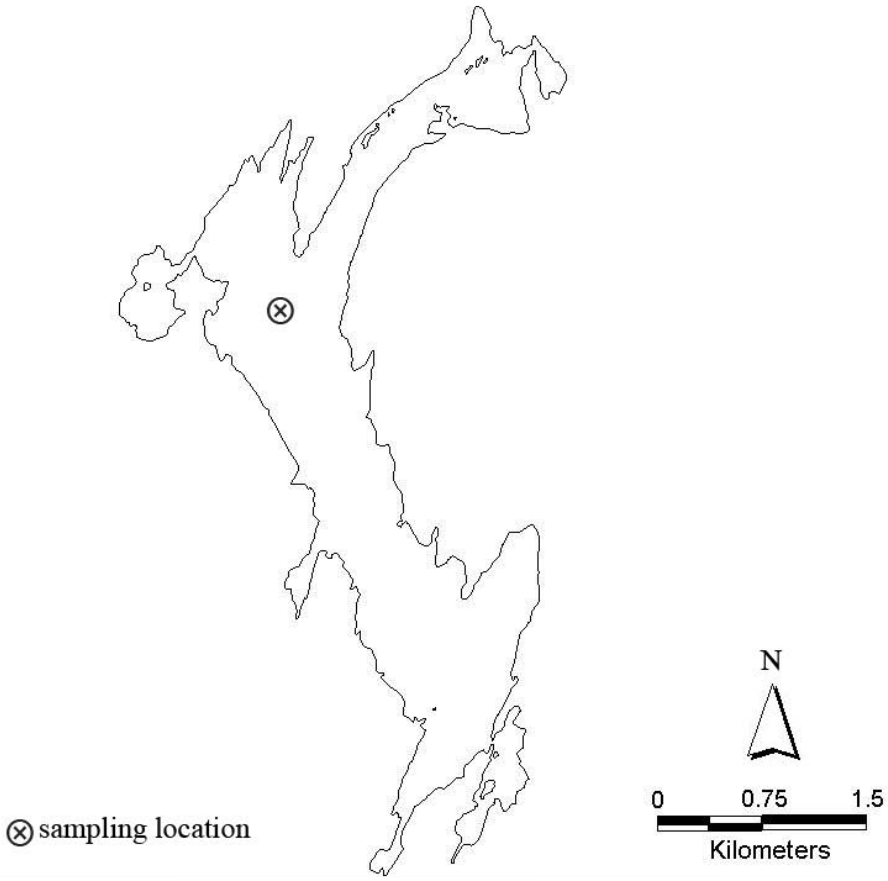
DAVID SES # 214

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	14.60 V	4.71 V	31.0 V	-1.03 V	2.20 V	0.550 V	0.700 V	0.300 V	0.45 V	9.5 V	N	8.1 V	0.500 V
7/19/1982	16.00 V	4.78 V	31.0 V	-0.84 V	2.00 V	0.600 V	N	N	N	9.6 V	N	3.0 V	N
8/01/1983	6.00 V	4.71 V	32.5 V	-0.95 V	1.80 V	0.520 V	0.500 V	0.280 V	0.32 V	9.7 V	N	7.2 V	0.610 V
7/18/1984	13.00 V	4.72 V	32.2 V	-0.86 V	1.69 V	0.500 V	0.520 V	0.250 V	0.45 V	8.5 V	1.5 V	N	0.560 V
7/30/1985	8.50 V	4.79 V	31.0 V	-1.30 V	1.70 V	0.500 V	0.540 V	0.260 V	0.15 T	8.4 V	2.5 V	N	0.640 V
7/14/1986	7.00 V	4.81 V	30.0 V	-0.75 V	1.90 V	0.560 V	0.500 V	0.270 V	0.65 V	8.5 V	1.0 T	N	0.480 V
7/20/1987	13.00 V	4.83 V	29.5 V	-0.63 V	1.60 V	0.460 V	0.540 V	0.250 V	0.35 V	8.2 V	0.5 T	N	0.420 V
7/13/1988	15.00 V	4.84 V	30.5 V	-0.61 V	1.80 V	0.560 V	O	O	0.50 T	8.7 V	1.0 T	N	0.460 V
7/17/1989	8.80 V	4.80 V	30.7 V	-0.89 V	1.70 V	0.520 V	0.520 V	0.280 V	0.30 T	9.4 V	2.0 T	N	0.620 V
7/17/1990	11.20 V	4.89 V	30.5 V	-0.72 V	1.80 V	0.540 V	0.640 V	0.340 V	0.20 T	9.3 V	1.5 T	N	0.500 V
7/11/1991	8.20 V	4.85 V	29.3 V	-0.70 C	1.50 V	0.520 V	0.580 V	0.300 V	0.20 T	9.1 V	1.5 V	N	0.500 V
7/07/1992	11.00 V	4.87 V	28.2 V	-0.84 C	1.70 V	0.510 V	0.560 V	0.290 V	0.40 T	8.9 V	2.0 V	N	0.580 V
7/14/1993	8.60 V	4.92 V	26.7 V	-0.78 V	1.60 V	0.460 V	0.560 V	0.242 V	0.20 T	7.7 V	2.2 V	N	0.820 V
7/27/1994	8.00 V	4.89 V	25.4 V	-0.74 V	1.45 V	0.450 V	0.520 V	0.233 V	0.20 W	7.7 V	1.0 T	N	0.520 V
7/10/1995	N	4.76 V	22.0 V	-0.58 C	1.30 V	0.440 V	0.560 V	0.270 V	0.40 T	8.0 V	2.8 V	N	0.540 V
7/08/1996	N	4.87 V	22.0 V	0.07 C	1.30 V	0.400 V	0.520 V	0.260 V	0.40 T	6.5 V	2.6 V	N	0.600 V
7/15/1997	N	4.99 V	22.1 V	-0.29 V	1.26 V	0.395 V	0.465 V	0.210 V	0.24 V	6.1 V	2.6 V	N	0.620 V
7/07/1998	N	5.10 V	21.0 V	-0.12 V	1.30 V	0.400 V	0.500 V	0.250 V	0.20 W	5.0 V	N	N	0.500 V
7/05/1999	N	5.10 V	21.5 V	-0.40 V	1.15 V	0.400 V	0.520 V	0.260 V	0.40 T	6.5 V	N	N	0.340 V
7/05/2000	N	5.20 V	21.5 V	-0.02 V	1.30 V	0.400 V	0.560 V	0.260 V	0.40 T	6.5 V	N	N	0.280 V
7/03/2001	N	5.10 V	21.9 V	-0.23 V	1.15 V	0.400 V	0.540 V	0.280 V	0.40 T	6.5 V	N	N	0.400 V
7/09/2002	N	5.11 V	20.6 V	-0.24 V	1.18 V	0.380 V	0.525 V	0.255 V	0.28 V	6.0 V	N	N	0.520 V
7/16/2003	6.00 V	5.21 V	17.2 V	-0.31 V	1.22 V	0.390 V	0.570 V	0.280 V	0.30 V	5.7 V	N	N	0.380 V
7/06/2004	8.50 V	5.24 V	17.6 V	-0.16 V	1.16 V	0.375 V	0.530 V	0.275 V	0.32 V	5.4 V	N	N	0.520 V
7/04/2005	7.25 V	5.47 V	17.2 V	N	1.12 V	0.380 V	0.570 V	0.300 V	0.34 V	5.5 V	N	N	0.440 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0600 V	0.1820 V	0.1700 V	0.0030 V	0.0100 V	0.0140 V	0.0060 V	0.09 V	0.026 V	0.116 C	0.7 V	0.40 V
7/19/1982	0.0250 T	0.1900 V	0.1400 V	0.0030 V	0.0120 V	0.0150 V	N	N	N	N	N	N
8/01/1983	0.0300 V	0.1560 V	0.1700 V	0.0030 V	0.0150 V	0.0210 V	N	N	N	N	N	N
7/18/1984	0.0550 V	0.1530 V	0.1900 V	0.0030 V	0.0140 V	0.0160 V	N	N	N	N	N	N
7/30/1985	0.0570 V	0.1000 V	0.1900 V	0.0050 V	0.0140 V	0.0170 V	N	N	N	N	N	N
7/14/1986	0.0130 V	0.1100 V	O	0.0010 V	O	0.0120 V	N	N	N	N	N	N
7/20/1987	0.0810 V	0.1500 V	0.1400 V	0.0030 V	0.0140 V	0.0130 V	N	N	N	N	N	N
7/13/1988	0.0370 T	0.1500 V	0.1600 V	0.0045 V	0.0140 V	0.0160 V	N	N	N	N	0.7 V	N
7/17/1989	0.0340 T	0.1500 V	0.1800 V	0.0045 V	0.0130 V	0.0130 V	N	N	N	N	0.7 V	N
7/17/1990	0.0600 T	0.1400 V	0.1700 V	0.0020 T	0.0120 V	0.0160 V	N	N	N	N	1.1 V	0.40 T
7/11/1991	0.0300 T	0.1300 V	0.1500 V	0.0030 V	0.0110 V	0.0130 V	0.0040 T	0.22 V	0.012 V	0.080 V	1.2 V	0.20 W
7/07/1992	0.1000 T	0.1200 V	0.1400 V	0.0030 V	0.0130 V	0.0100 V	0.0050 T	0.13 V	0.034 V	0.080 V	1.6 V	0.20 W
7/14/1993	0.0280 T	0.1000 V	0.1300 V	0.0042 V	0.0120 V	0.0110 V	0.0040 T	0.12 V	0.016 V	0.100 V	1.3 V	O
7/27/1994	0.0290 T	0.1200 V	0.1400 V	0.0042 V	0.0110 V	0.0110 V	0.0040 T	0.16 V	0.018 V	0.060 V	1.4 V	0.20 W
7/10/1995	0.0200 W	0.1000 V	0.1100 V	0.0024 V	0.0100 V	0.0090 V	0.0020 W	0.12 V	0.008 T	0.075 V	1.3 V	0.20 T
7/08/1996	0.0400 T	0.0960 V	0.1100 V	0.0018 V	0.0095 V	0.0085 V	0.0040 T	0.16 V	0.022 V	O	1.1 V	0.20 W
7/15/1997	0.0219 V	0.0938 V	0.1030 V	0.0019 V	0.0104 V	0.0091 V	0.0021 V*	0.12 V	0.012 V	0.086 V	1.2 V	0.22 V
7/07/1998	0.0286 V	0.0918 V	0.0954 V	0.0019 V	0.0101 V	0.0096 V	0.0020 W	0.12 V	0.008 T	0.045 V	1.3 V	0.20 W
7/05/1999	0.0247 V	0.0873 V	0.0729 V	0.0018 V	0.0086 V	0.0098 V	0.0020 W	0.12 V	0.020 V	0.045 V	1.5 V	0.80 T
7/05/2000	0.0135 V	0.0806 V	0.0640 V	0.0017 V	0.0087 V	0.0087 V	0.0040 T	0.12 V	0.016 V	0.059 V	1.1 V	0.40 T
7/03/2001	0.0237 V	0.0757 V	0.0709 V	0.0014 V	0.0093 V	0.0090 V	0.0040 T	0.16 V	0.012 V	0.074 V	1.9 V	0.40 T
7/09/2002	0.0101 V	0.0455 V	0.0277 V	0.0008 D	0.0039 V	0.0057 V	0.0041 V*	0.16 V	0.036 V	0.076 V	1.0 V	0.04 T
7/16/2003	0.0319 V	0.0625 V	0.0674 V	0.0013 V	0.0089 V	0.0085 V	0.0044 V*	0.19 V	0.026 V	0.046 V	2.3 V	0.20 V
7/06/2004	0.0342 V	0.0475 V	0.0609 V	0.0009 V	0.0065 V	0.0063 V	0.0030 V*	0.09 V	0.020 V	0.046 V	1.9 V	0.32 V
7/04/2005	0.0236 V	0.0455 V	0.0494 V	0.0021 V	0.0060 V	0.0073 V	0.0035 V*	0.13 V	N	N	2.0 V	O

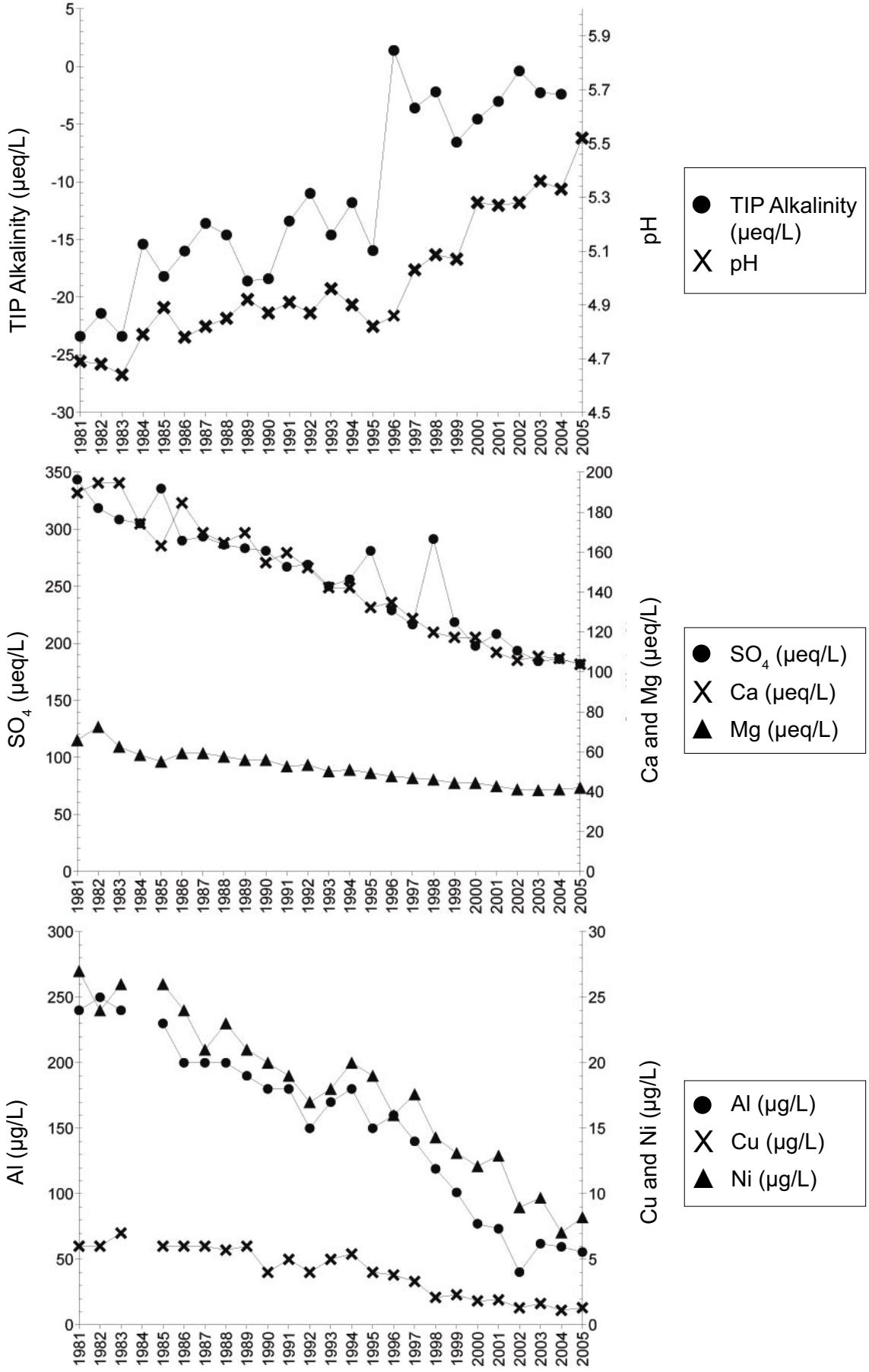
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Donald Lake



SES ID #	121	**Shoreline length (km)**	31.19
Township	Kelly/McCarthy	**Maximum depth (m)**	60.0
Latitude	46°47’	**Mean depth (m)**	15.4
Longitude	80°30’	**Volume (x 10^4 m^3)**	7670
Distance from Sudbury (km)	53	**Area (ha)**	502.18
Elevation (m)	272	**Road access**	No
Watershed code	2DC02		

Donald Lake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pH
TIP Alkalinity (µeq/L)
pH
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Ca and Mg (µeq/L)
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Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

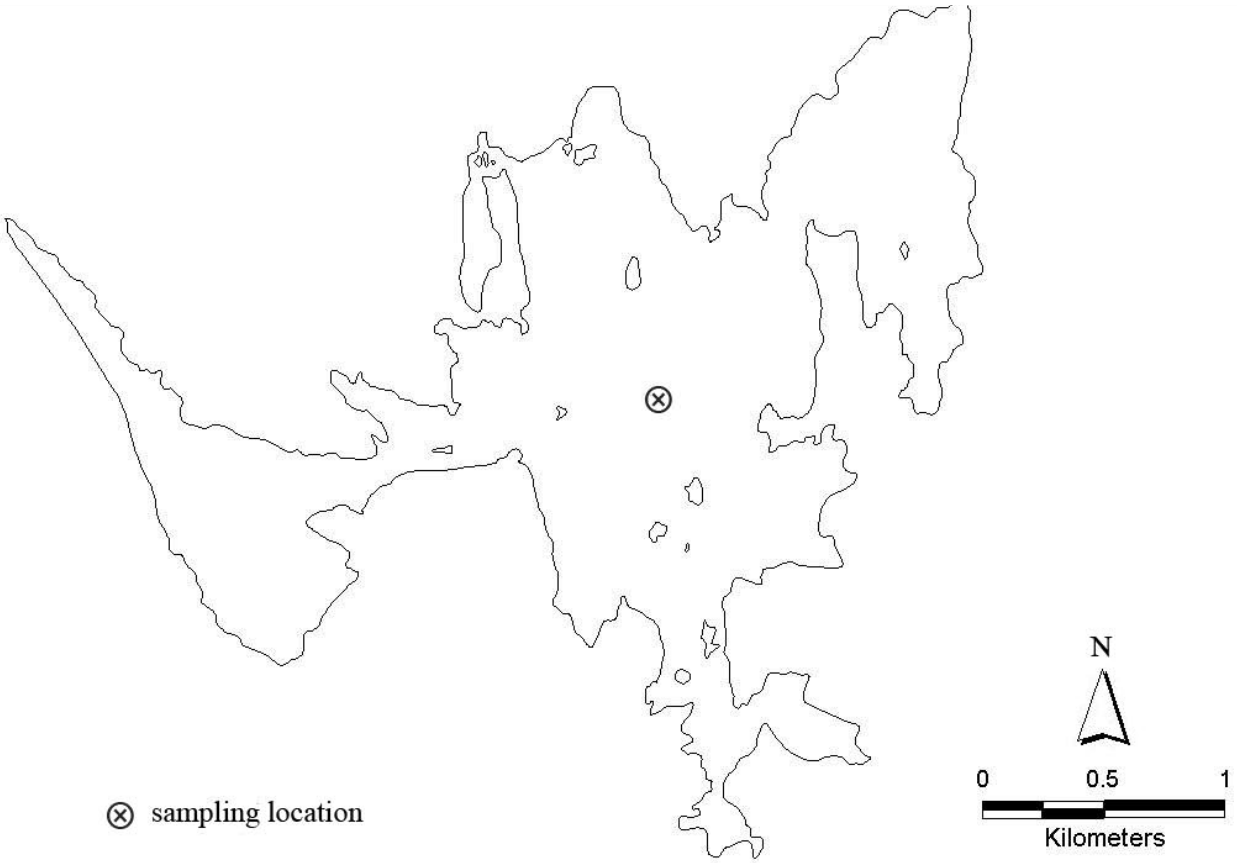
DONALD SES # 121

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
6/16/1981	14.10 V	4.69 V	48.0 V	-1.17 V	3.80 V	0.800 V	0.600 V	0.300 V	0.40 V	16.5 V	N	0.4 V	0.400 V
7/17/1982	15.00 V	4.68 V	47.0 V	-1.07 V	3.90 V	0.880 V	N	N	N	15.3 V	N	N	N
8/02/1983	13.00 V	4.64 V	47.6 V	-1.17 V	3.90 V	0.760 V	0.700 V	0.340 V	0.29 V	14.8 V	N	0.4 V	0.340 V
7/23/1984	10.50 V	4.79 V	46.5 V	-0.77 V	3.49 V	0.710 V	0.680 V	0.220 V	0.21 V	14.7 V	1.0 V	N	0.340 V
7/23/1985	15.00 V	4.89 V	45.0 V	-0.91 V	3.27 V	0.670 V	0.640 V	0.250 V	0.20 V	16.1 V	1.5 V	N	0.370 V
8/07/1986	15.00 V	4.78 V	43.5 V	-0.80 V	3.70 V	0.720 V	0.670 V	0.230 V	0.30 V	13.9 V	0.5 W	N	0.380 V
7/16/1987	15.00 V	4.82 V	43.0 V	-0.68 V	3.40 V	0.720 V	0.740 V	0.230 V	0.25 V	14.1 V	0.5 W	N	0.360 V
7/14/1988	18.00 V	4.85 V	42.4 V	-0.73 V	3.30 V	0.700 V	0.680 V	0.240 V	0.30 T	13.8 V	0.5 T	N	0.340 V
7/26/1989	17.20 V	4.92 V	41.5 V	-0.93 V	3.40 V	0.680 V	0.720 V	0.240 V	0.20 T	13.6 V	0.5 T	N	0.320 V
7/18/1990	14.80 V	4.87 V	40.7 V	-0.92 V	3.10 V	0.680 V	0.680 V	0.250 V	0.30 T	13.5 V	0.5 W	N	0.260 V
7/10/1991	19.50 V	4.91 V	39.5 V	-0.67 C	3.20 V	0.640 V	0.780 V	0.230 V	0.30 T	12.8 V	0.5 T	N	0.340 V
7/14/1992	16.00 V	4.87 V	39.3 V	-0.55 C	3.05 V	0.650 V	0.700 V	0.220 V	0.30 T	12.9 V	0.5 T	N	0.320 V
7/13/1993	12.75 V	4.96 V	37.9 V	-0.73 V	2.85 V	0.610 V	0.700 V	0.220 V	0.20 T	12.0 V	0.2 W	N	0.360 V
7/28/1994	18.20 V	4.90 V	37.0 V	-0.59 V	2.85 V	0.620 V	0.690 V	0.213 V	0.20 W	12.3 V	0.4 T	N	0.340 V
7/10/1995	N	4.82 V	35.0 V	-0.80 C	2.65 V	0.600 V	0.680 V	0.210 V	0.40 T	13.5 V	0.2 W	N	0.420 V
7/08/1996	N	4.86 V	33.0 V	0.07 C	2.70 V	0.580 V	0.720 V	0.220 V	0.20 W	11.0 V	0.2 V	N	0.480 V
7/15/1997	N	5.03 V	33.5 V	-0.18 V	2.54 V	0.570 V	0.660 V	0.180 V	0.21 V	10.4 V	1.2 V	N	0.560 V
7/12/1998	N	5.09 V	31.4 V	-0.11 V	2.40 V	0.560 V	0.760 V	0.200 V	0.20 W	14.0 V	N	N	0.580 V
7/14/1999	N	5.07 V	31.4 V	-0.33 V	2.35 V	0.540 V	0.700 V	0.200 V	0.20 W	10.5 V	N	N	0.520 V
7/17/2000	N	5.28 V	29.4 V	-0.23 V	2.35 V	0.540 V	0.700 V	0.200 V	O	9.5 V	N	N	0.620 V
7/03/2001	N	5.27 V	30.1 V	-0.15 V	2.20 V	0.520 V	0.700 V	0.190 V	0.20 W	10.0 V	N	N	0.600 V
7/09/2002	N	5.28 V	27.3 V	-0.02 V	2.12 V	0.500 V	0.675 V	0.175 V	0.23 V	9.3 V	N	N	0.340 V
7/17/2003	10.40 V	5.36 V	26.2 V	-0.11 V	2.16 V	0.495 V	0.670 V	0.185 V	0.23 V	8.9 V	N	N	0.400 V
7/12/2004	14.50 V	5.33 V	24.6 V	-0.12 V	2.14 V	0.500 V	0.705 V	0.175 V	0.28 V	9.0 V	N	N	0.440 V
7/04/2005	16.25 V	5.52 V	25.8 V	N	2.08 V	0.510 V	0.710 V	0.195 V	0.25 V	8.8 V	N	N	0.300 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
6/16/1981	0.0300 V	0.2580 V	0.2400 V	0.0060 V	0.0270 V	0.0140 V	0.0020 V	0.08 V	0.028 V	0.106 C	0.8 V	0.20 T
7/17/1982	0.0250 T	0.2460 V	0.2500 V	0.0060 V	0.0240 V	0.0150 V	N	N	N	N	N	N
8/02/1983	O	0.2300 V	0.2400 V	0.0070 V	0.0260 V	0.0260 V	N	N	N	N	N	N
7/23/1984	0.0400 T	0.2200 V	N	N	N	N	N	N	N	N	N	N
7/23/1985	0.0280 V	0.2300 V	0.2300 V	0.0060 V	0.0260 V	0.0190 V	N	N	N	N	N	N
8/07/1986	0.0250 V	0.2000 V	0.2000 V	0.0060 V	0.0240 V	0.0140 V	N	N	N	N	N	N
7/16/1987	0.0240 V	0.1800 V	0.2000 V	0.0060 V	0.0210 V	0.0130 V	N	N	N	N	N	N
7/14/1988	0.0770 T	0.1900 V	0.2000 V	0.0057 V	0.0230 V	0.0170 V	N	N	N	N	0.4 T	N
7/26/1989	0.0340 T	0.1800 V	0.1900 V	0.0060 V	0.0210 V	0.0120 V	N	N	N	N	0.3 T	N
7/18/1990	0.0200 W	0.1700 V	0.1800 V	0.0040 V	0.0200 V	0.0110 V	N	N	N	N	0.3 T	0.20 T
7/10/1991	0.0200 W	0.1700 V	0.1800 V	0.0050 V	0.0190 V	0.0100 V	0.0020 T	0.08 T	0.026 V	0.085 V	0.6 V	0.20 W
7/14/1992	0.0200 W	0.1500 V	0.1500 V	0.0040 V	0.0170 V	0.0100 V	0.0030 T	0.07 T	0.014 V	0.095 V	0.9 V	0.20 W
7/13/1993	0.0210 T	0.1400 V	0.1700 V	0.0050 V	0.0180 V	0.0096 V	0.0060 T	0.10 V	0.016 V	0.080 V	0.7 V	0.20 T
7/28/1994	0.0250 T	0.1600 V	0.1800 V	0.0054 V	0.0200 V	0.0110 V	0.0020 T	0.08 T	0.024 V	0.060 V	0.5 V	0.20 W
7/10/1995	0.0200 W	0.1400 V	0.1500 V	0.0040 V	0.0190 V	0.0095 V	O	O	0.008 T	0.085 V	0.6 V	0.20 W
7/08/1996	0.0200 W	0.1200 V	0.1600 V	0.0038 V	0.0160 V	0.0085 V	0.0020 W	0.10 V	0.016 V	N	0.7 V	0.20 W
7/15/1997	0.0247 V	0.1220 V	0.1400 V	0.0033 V	0.0176 V	0.0089 V	0.0021 V*	0.08 T	0.026 V	0.090 V	0.6 V	0.18 V
7/12/1998	0.0203 V	0.1120 V	0.1190 V	0.0021 V	0.0143 V	0.0078 V	0.0020 W	0.10 V	0.012 V	0.070 V	0.7 V	0.20 W
7/14/1999	0.0207 V	0.1020 V	0.1010 V	0.0023 V	0.0131 V	0.0070 V	0.0040 T	0.08 T	0.014 V	0.075 V	0.8 V	0.40 T
7/17/2000	0.0162 V	0.1120 V	0.0771 V	0.0018 V	0.0121 V	0.0063 V	0.0080 T	0.06 T	0.016 V	0.058 V	0.7 V	0.40 T
7/03/2001	0.0164 V	0.1180 V	0.0733 V	0.0019 V	0.0129 V	0.0066 V	0.0040 T	0.08 T	0.024 V	0.042 V	0.7 V	0.20 W
7/09/2002	O	0.0820 V	0.0402 V	0.0013 V	0.0090 V	0.0047 V	0.0022 V*	0.11 V	N	0.026 V	0.6 V	O
7/17/2003	0.0068 V	0.0697 V	0.0619 V	0.0016 V	0.0097 V	0.0055 V	0.0017 V*	0.18 V	0.020 V	0.024 V	1.7 V	0.18 V
7/12/2004	0.0083 V	0.0579 V	0.0595 V	0.0011 V	0.0071 V	0.0063 V	0.0052 V*	0.09 V	0.012 V	0.026 V	1.1 V	0.26 V
7/04/2005	0.0126 V	0.0512 V	0.0555 V	0.0013 V	0.0082 V	0.0052 V	0.0019 V*	0.11 V	N	N	0.9 V	0.46 V

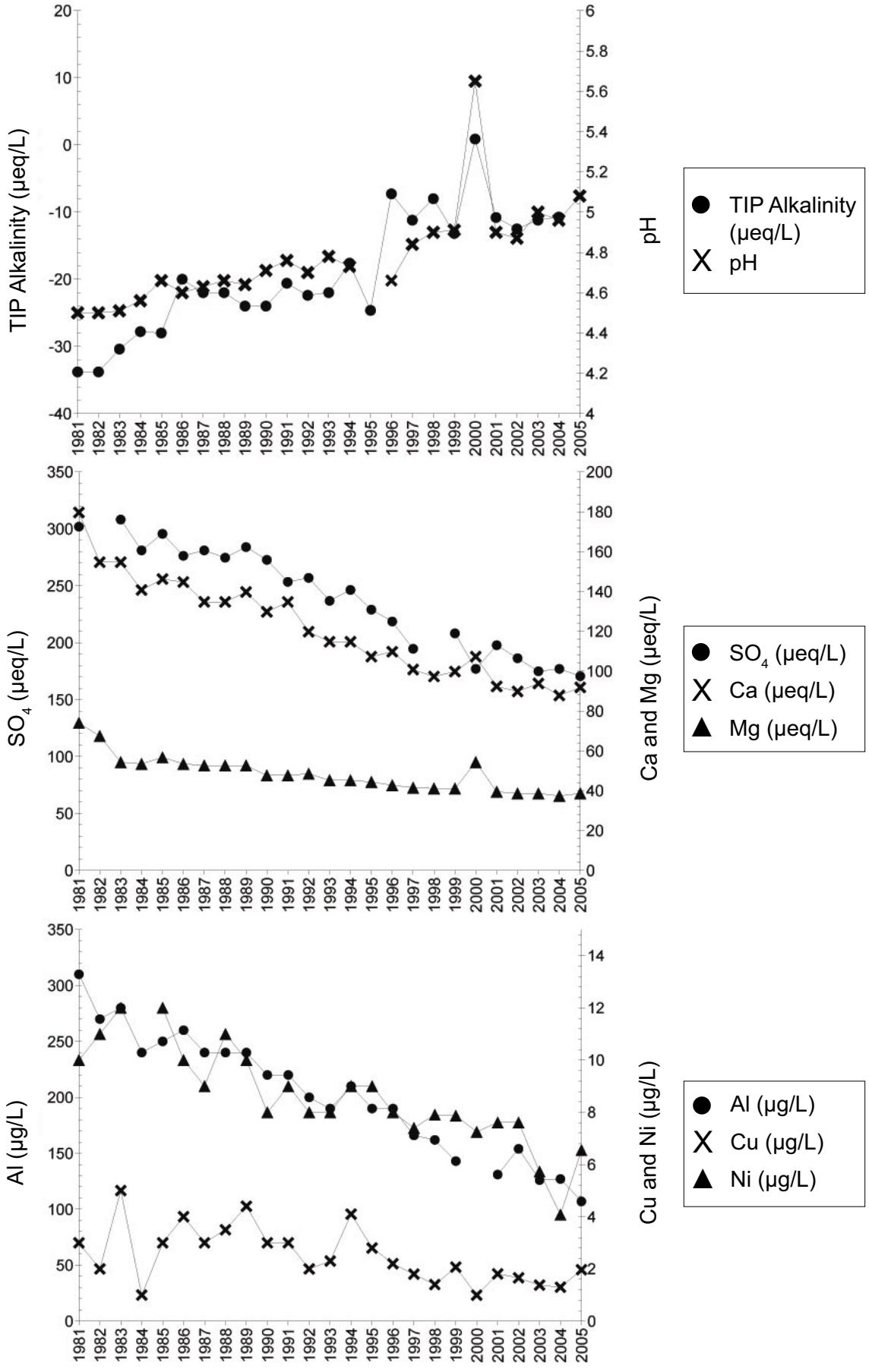
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Dougherty Lake



SES ID #	237	**Shoreline length (km)**	26.80
Township	DeMorest/Stobie	**Maximum depth (m)**	53.4
Latitude	47°00’	**Mean depth (m)**	13.3
Longitude	80°40’	**Volume (x 10^4 m^3)**	4230
Distance from Sudbury (km)	64	**Area (ha)**	426.93
Elevation (m)	328	**Road access**	No
Watershed code	2DC01		

Dougherty Lake



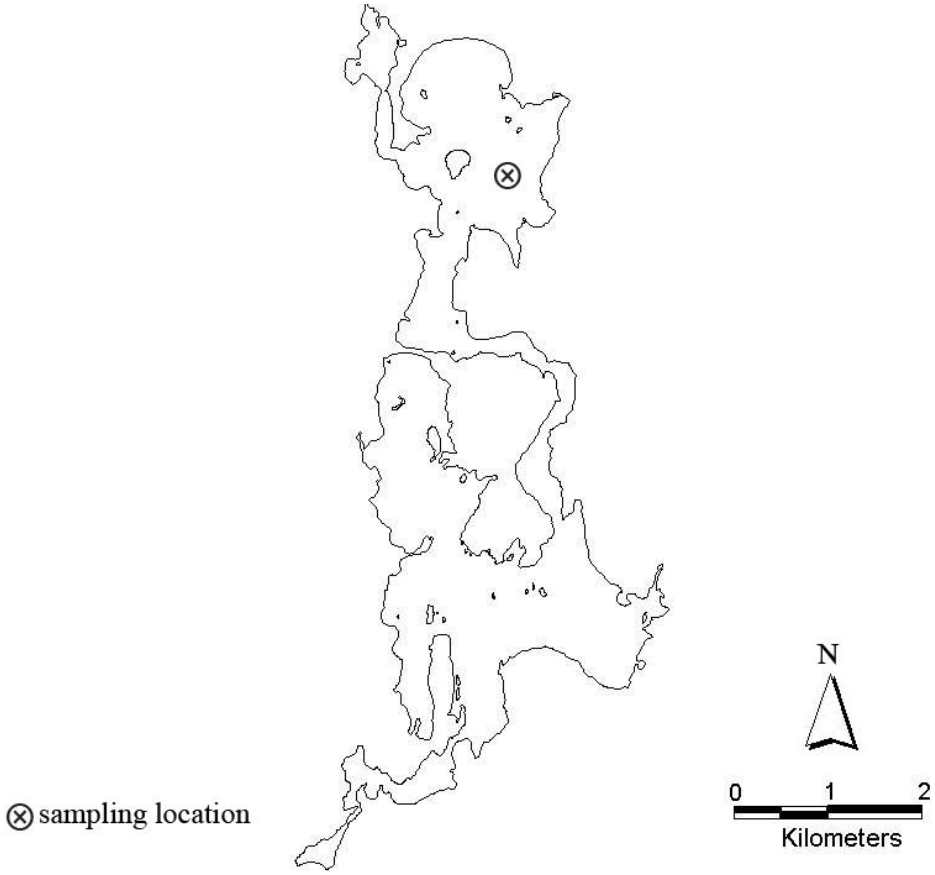
DOUGHERTY SES # 237

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	11.80 V	4.50 V	48.0 V	-1.69 V	3.60 V	0.900 V	0.600 V	0.450 V	0.30 V	14.5 V	N	-0.9 V	0.450 V
7/18/1982	6.50 V	4.50 V	47.0 V	-1.69 V	3.10 V	0.820 V	N	N	N	O	N	1.5 V	N
8/04/1983	14.00 V	4.51 V	44.6 V	-1.52 V	3.10 V	0.660 V	0.600 V	0.400 V	0.22 V	14.8 V	N	2.4 V	0.440 V
7/23/1984	11.50 V	4.56 V	45.5 V	-1.39 V	2.82 V	0.650 V	0.570 V	0.310 V	0.20 V	13.5 V	1.0 V	N	0.400 V
8/05/1985	15.00 V	4.66 V	45.0 V	-1.40 V	2.93 V	0.690 V	0.620 V	0.340 V	0.17 T	14.2 V	1.5 V	N	0.440 V
7/21/1986	12.00 V	4.60 V	42.0 V	-1.00 V	2.90 V	0.650 V	0.600 V	0.320 V	0.40 V	13.3 V	1.5 T	N	0.460 V
7/16/1987	15.30 V	4.63 V	43.0 V	-1.10 V	2.70 V	0.640 V	0.600 V	0.290 V	0.25 V	13.5 V	0.5 W	N	0.400 V
7/20/1988	12.50 V	4.66 V	42.6 V	-1.10 V	2.70 V	0.640 V	0.580 V	0.330 V	O	13.2 V	1.0 T	N	0.240 V
7/18/1989	14.60 V	4.64 V	41.2 V	-1.20 V	2.80 V	0.640 V	0.560 V	0.310 V	0.20 T	13.6 V	1.0 T	N	0.480 V
7/16/1990	11.00 V	4.71 V	41.6 V	-1.20 V	2.60 V	0.580 V	0.640 V	0.300 V	0.30 T	13.1 V	1.0 T	N	0.380 V
7/09/1991	19.80 V	4.76 V	39.0 V	-1.03 C	2.70 V	0.580 V	0.700 V	0.310 V	0.20 T	12.2 V	0.5 T	N	0.320 V
7/14/1992	14.50 V	4.70 V	38.5 V	-1.12 C	2.40 V	0.590 V	0.580 V	0.255 V	0.30 T	12.3 V	0.5 T	N	0.240 V
7/13/1993	14.50 V	4.78 V	37.2 V	-1.10 V	2.30 V	0.550 V	0.590 V	0.275 V	0.20 W	11.4 V	0.2 W	N	0.420 V
7/25/1994	18.00 V	4.73 V	36.3 V	-0.88 V	2.30 V	0.550 V	0.600 V	0.275 V	0.20 W	11.8 V	0.4 T	N	0.420 V
7/10/1995	N	O	34.0 V	-1.23 C	2.15 V	0.540 V	0.600 V	0.270 V	0.40 T	11.0 V	0.2 W	N	0.460 V
7/08/1996	N	4.66 V	32.0 V	-0.36 C	2.20 V	0.520 V	0.600 V	0.250 V	0.40 T	10.5 V	1.0 V	N	0.420 V
7/15/1997	N	4.84 V	32.2 V	-0.56 V	2.02 V	0.505 V	0.565 V	0.230 V	0.21 V	9.4 V	1.8 V	N	0.520 V
7/12/1998	N	4.90 V	31.2 V	-0.40 V	1.95 V	0.500 V	0.620 V	0.260 V	0.20 W	O	N	N	0.440 V
7/13/1999	N	4.91 V	31.4 V	-0.66 V	2.00 V	0.500 V	0.600 V	0.250 V	0.20 W	10.0 V	N	N	0.320 V
7/17/2000	N	5.65 V	27.8 V	0.04 V	2.15 V	0.660 V	0.700 V	0.310 V	0.60 T	8.5 V	N	N	0.460 V
7/02/2001	N	4.90 V	30.4 V	-0.54 V	1.85 V	0.480 V	0.600 V	0.240 V	0.20 W	9.5 V	N	N	0.420 V
7/09/2002	N	4.87 V	29.0 V	-0.63 V	1.80 V	0.470 V	0.595 V	0.225 V	0.24 V	9.0 V	N	N	0.440 V
7/24/2003	13.60 V	5.00 V	O	-0.56 V	1.88 V	0.470 V	0.625 V	0.240 V	0.27 V	8.4 V	N	N	0.500 V
7/13/2004	14.50 V	4.96 V	25.4 V	-0.54 V	1.76 V	0.455 V	0.645 V	0.220 V	0.26 V	8.5 V	N	N	0.620 V
7/07/2005	13.00 V	5.08 V	25.0 V	N	1.84 V	0.470 V	0.780 V	0.270 V	0.26 V	8.2 V	N	N	0.540 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0300 V	0.2720 V	0.3100 V	0.0030 V	0.0100 V	0.0100 V	0.0030 V	0.06 V	0.016 V	0.106 C	0.5 V	0.40 V
7/18/1982	0.0300 T	0.2870 V	0.2700 V	0.0020 V	0.0110 V	0.0090 V	N	N	N	N	N	N
8/04/1983	0.0300 V	0.2750 V	0.2800 V	0.0050 V	0.0120 V	O	N	N	N	N	N	N
7/23/1984	0.0400 T	0.2500 V	0.2400 V	0.0010 L	O	O	N	N	N	N	N	N
8/05/1985	0.0330 V	0.2800 V	0.2500 V	0.0030 V	0.0120 V	0.0130 V	N	N	N	N	N	N
7/21/1986	0.0310 V	0.2400 V	0.2600 V	0.0040 V	0.0100 V	0.0100 V	N	N	N	N	N	N
7/16/1987	0.0250 V	0.2300 V	0.2400 V	0.0030 V	0.0090 V	0.0100 V	N	N	N	N	N	N
7/20/1988	0.0340 T	0.2400 V	0.2400 V	0.0035 V	0.0110 V	0.0100 V	N	N	N	N	0.6 V	N
7/18/1989	0.0320 T	0.2400 V	0.2400 V	0.0044 V	0.0100 T	0.0093 V	N	N	N	N	0.5 V	N
7/16/1990	0.0300 T	0.2300 V	0.2200 V	0.0030 V	0.0080 T	0.0080 V	N	N	N	N	0.7 V	0.20 W
7/09/1991	0.0300 T	0.2200 V	0.2200 V	0.0030 V	0.0090 T	0.0080 V	0.0040 T	0.12 V	0.018 V	0.075 V	0.8 V	0.20 W
7/14/1992	0.0200 W	0.2100 V	0.2000 V	0.0020 T	0.0080 T	0.0070 V	0.0030 T	0.07 T	0.010 V	0.090 V	0.6 V	0.20 W
7/13/1993	0.0350 T	0.1900 V	0.1900 V	0.0023 T	0.0080 T	0.0058 V	0.0080 T	0.10 V	0.022 V	0.075 V	0.6 V	0.20 T
7/25/1994	0.0350 T	0.2200 V	0.2100 V	0.0041 V	0.0090 T	0.0075 V	0.0040 T	0.08 T	0.020 V	0.075 V	0.4 T	0.20 W
7/10/1995	0.0400 T	0.1900 V	0.1900 V	0.0028 V	0.0090 V	0.0065 V	0.0040 T	0.08 T	0.014 V	0.115 V	0.6 V	0.20 W
7/08/1996	0.0200 W	0.1800 V	0.1900 V	0.0022 V	0.0080 V	0.0060 V	0.0020 W	0.14 V	0.020 V	0.060 V	0.3 T	0.20 W
7/15/1997	0.0293 V	0.1740 V	0.1660 V	0.0018 V	0.0074 V	0.0060 V	0.0029 V*	0.10 V	0.018 V	0.086 V	0.6 V	0.22 V
7/12/1998	0.0245 V	0.1670 V	0.1620 V	0.0014 V	0.0079 V	0.0062 V	0.0020 W	0.12 V	0.016 V	0.080 V	0.4 T	0.20 W
7/13/1999	0.0179 V	0.1620 V	0.1430 V	0.0021 V	0.0079 V	0.0061 V	0.0040 T	0.08 T	0.016 V	0.095 V	0.5 V	0.20 W
7/17/2000	0.0166 V	0.0756 V	O	0.0010 V	0.0073 V	0.0047 V	0.0040 T	0.12 V	0.016 V	0.047 V	1.2 V	0.40 T
7/02/2001	0.0286 V	0.1550 V	0.1310 V	0.0018 V	0.0076 V	0.0060 V	0.0040 T	0.08 T	0.028 V	0.088 V	0.5 V	0.20 W
7/09/2002	0.0380 V	0.1360 V	0.1540 V	0.0017 V	0.0076 V	0.0055 V	0.0070 V*	0.11 V	N	0.080 V	0.5 V	0.02 W
7/24/2003	0.0269 V	0.1090 V	0.1260 V	0.0014 V	0.0057 V	0.0090 V	0.0028 V*	0.15 V	0.026 V	0.070 V	0.8 V	0.22 V
7/13/2004	0.0216 V	0.1060 V	0.1270 V	0.0013 V	0.0041 V	0.0043 V	0.0032 V*	0.09 V	0.016 V	0.058 V	0.8 V	0.30 V
7/07/2005	0.0231 V	0.1110 V	0.1070 V	0.0020 V	0.0066 V	0.0053 V	0.0031 V*	0.16 V	0.018 V	0.060 V	0.5 V	0.18 V

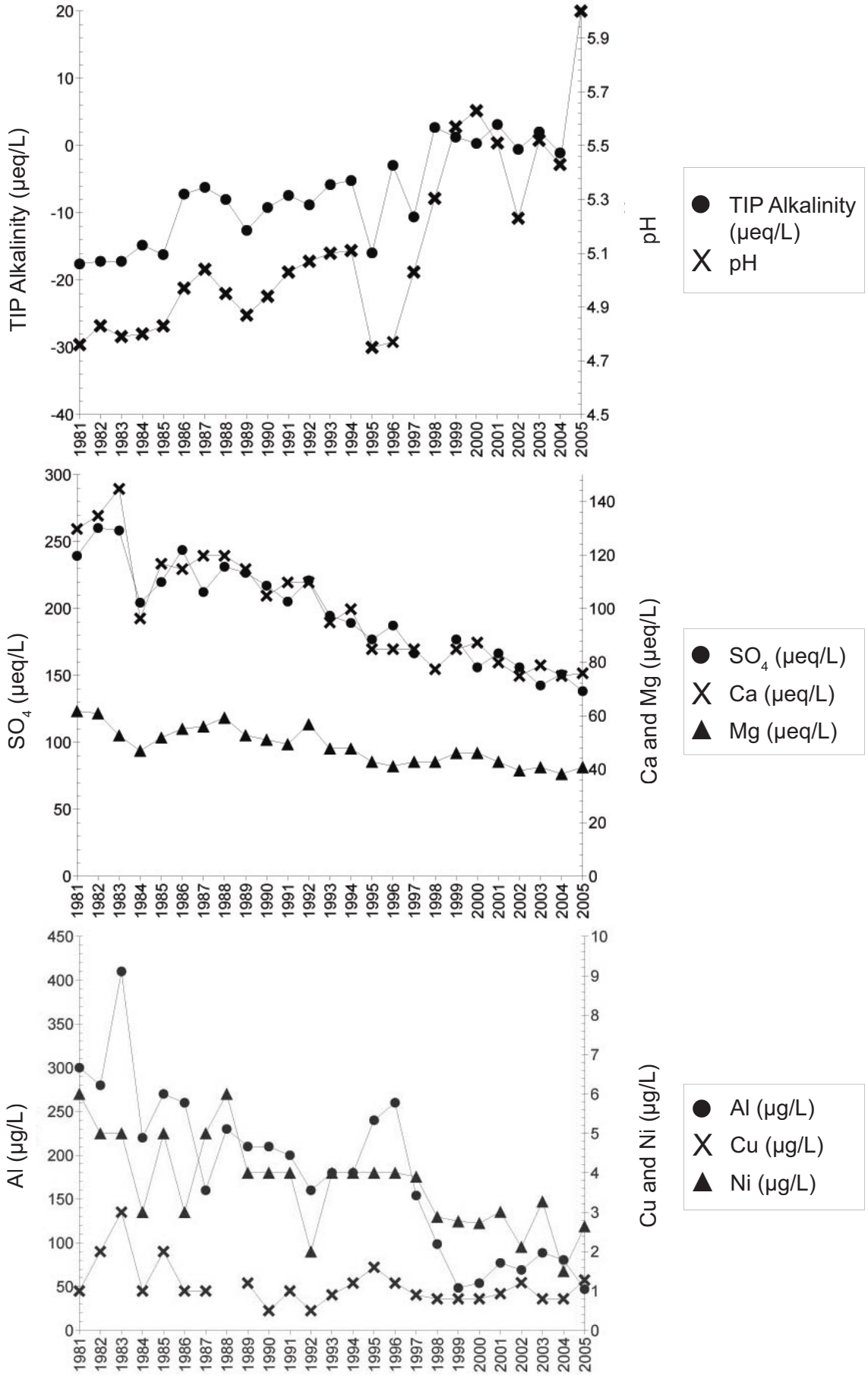
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Florence Lake



SES ID #	94	**Shoreline length (km)**	54.62
Township	Parker/Dundee	**Maximum depth (m)**	38.1
Latitude	47°14’	**Mean depth (m)**	7.5
Longitude	80°32’	**Volume (x 10^4 m^3)**	7489
Distance from Sudbury (km)	89	**Area (ha)**	1019.52
Elevation (m)	365	**Road access**	No
Watershed code	2JD03		

Florence Lake



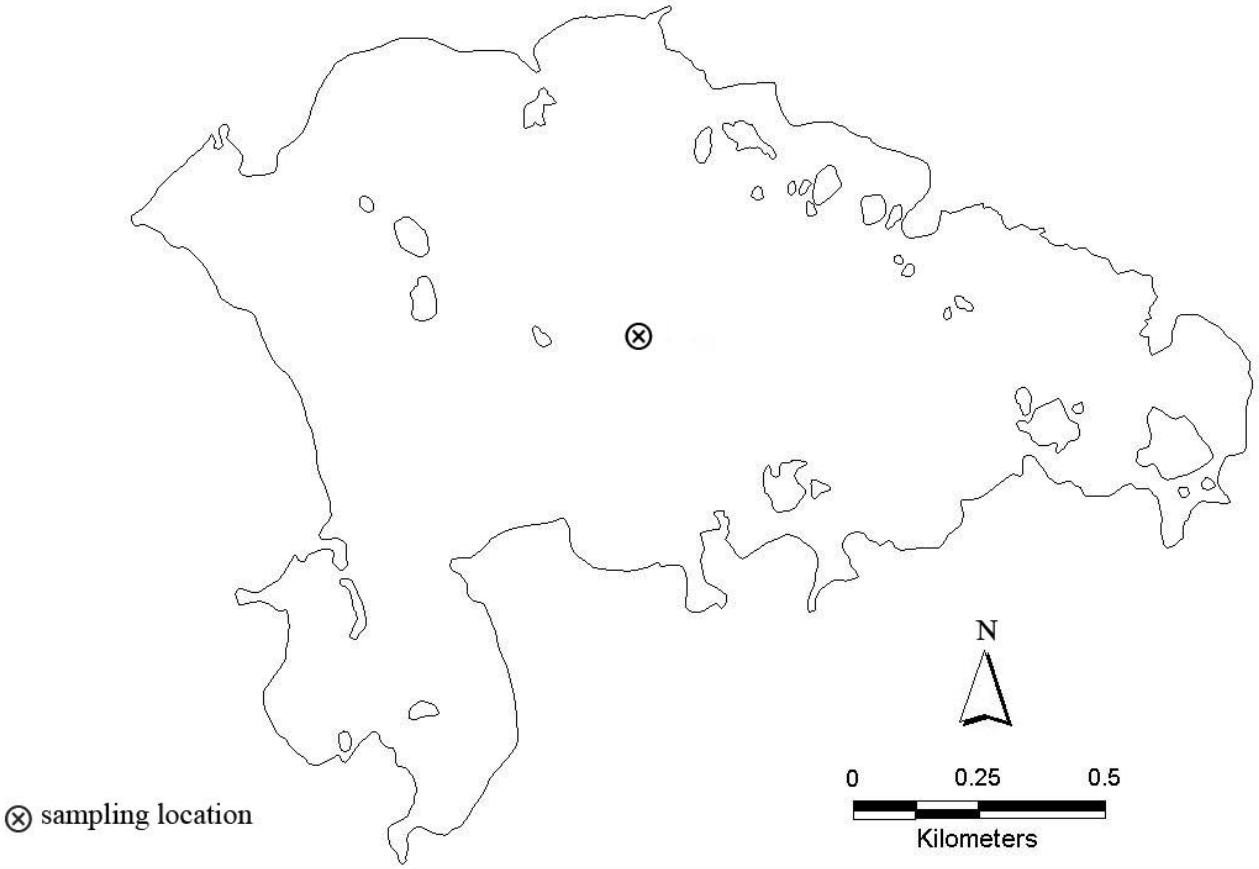
FLORENCE SES # 94

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/09/1981	10.30 V	4.76 V	38.0 V	-0.88 V	2.60 V	0.750 V	0.800 V	0.350 V	0.35 V	11.5 V	N	6.3 V	0.850 V
7/08/1982	6.50 V	4.83 V	39.0 V	-0.86 V	2.70 V	0.740 V	N	N	N	12.5 V	N	6.8 V	N
7/12/1983	14.00 V	4.79 V	39.2 V	-0.86 V	2.90 V	0.640 V	0.650 V	0.380 V	0.30 V	12.4 V	N	2.4 V	1.140 V
7/24/1984	7.00 V	4.80 V	36.5 V	-0.74 V	1.93 V	0.570 V	0.610 V	0.330 V	0.14 T	9.8 V	5.0 V	N	O
7/30/1985	6.50 V	4.83 V	35.0 V	-0.81 V	2.34 V	0.630 V	0.660 V	0.370 V	0.08 T	10.6 V	7.5 V	N	0.960 V
7/15/1986	14.00 V	4.97 V	34.0 V	-0.36 V	2.30 V	0.670 V	0.660 V	0.380 V	0.60 V	11.7 V	3.5 V	N	1.080 V
7/15/1987	15.00 V	5.04 V	34.0 V	-0.31 V	2.40 V	0.680 V	0.700 V	0.310 V	0.25 V	10.2 V	2.0 V	N	0.680 V
7/13/1988	8.00 V	4.95 V	35.5 V	-0.40 V	2.40 V	0.720 V	0.860 V	0.480 V	0.50 T	11.1 V	4.5 V	N	0.860 V
7/19/1989	8.90 V	4.87 V	33.5 V	-0.63 V	2.30 V	0.640 V	0.700 V	0.360 V	0.20 T	10.9 V	4.5 V	N	0.940 V
7/25/1990	9.00 V	4.94 V	32.5 V	-0.46 V	2.10 V	0.620 V	0.760 V	0.370 V	0.20 W	10.4 V	6.5 V	N	0.900 V
7/09/1991	10.50 V	5.03 V	30.8 V	-0.37 C	2.20 V	0.600 V	0.760 V	0.370 V	0.30 T	9.9 V	4.0 V	N	1.000 V
7/08/1992	9.75 V	5.07 V	30.9 V	-0.44 C	2.20 V	0.690 V	0.770 V	0.360 V	0.20 T	10.6 V	4.0 V	N	0.920 V
7/06/1993	6.00 V	5.10 V	29.7 V	-0.29 V	1.90 V	0.580 V	0.650 V	0.309 V	0.20 W	9.4 V	5.4 V	N	1.120 V
7/04/1994	6.50 V	5.11 V	28.4 V	-0.26 V	2.00 V	0.580 V	0.660 V	0.329 V	0.20 W	9.1 V	4.4 V	N	0.940 V
7/12/1995	N	4.75 V	30.0 V	-0.80 C	1.70 V	0.520 V	0.600 V	0.280 V	0.20 W	8.5 V	2.4 V	N	1.040 V
7/08/1996	N	4.77 V	28.0 V	-0.15 C	1.70 V	0.500 V	0.640 V	0.280 V	0.20 W	9.0 V	2.4 V	N	1.060 V
7/07/1997	N	5.03 V	25.4 V	-0.53 V	1.70 V	0.520 V	0.615 V	0.250 V	0.18 V	8.0 V	6.8 V	N	0.960 V
7/12/1998	N	5.30 V	24.8 V	0.13 V	1.55 V	0.520 V	0.720 V	0.290 V	0.20 W	O	N	N	0.680 V
7/13/1999	N	5.57 V	25.0 V	0.06 V	1.70 V	0.560 V	0.700 V	0.280 V	0.20 W	8.5 V	N	N	0.400 V
7/17/2000	N	5.63 V	23.9 V	0.02 V	1.75 V	0.560 V	0.720 V	0.290 V	0.20 W	7.5 V	N	N	0.520 V
7/02/2001	N	5.51 V	25.4 V	0.16 V	1.60 V	0.520 V	0.700 V	0.300 V	0.20 W	8.0 V	N	N	0.580 V
7/09/2002	N	5.23 V	25.2 V	-0.03 V	1.50 V	0.480 V	0.660 V	0.255 V	0.21 V	7.5 V	N	N	0.720 V
7/24/2003	5.30 V	5.52 V	30.6 V	0.10 V	1.58 V	0.495 V	0.705 V	0.270 V	0.22 V	6.9 V	N	N	0.600 V
7/12/2004	7.60 V	5.43 V	19.6 V	-0.05 V	1.50 V	0.465 V	0.670 V	0.250 V	0.21 V	7.3 V	N	N	0.820 V
7/07/2005	7.50 V	6.00 V	20.0 V	N	1.52 V	0.495 V	0.675 V	0.260 V	0.20 V	6.7 V	N	N	0.600 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/09/1981	0.0200 V	0.1680 V	0.3000 V	0.0010 V	0.0060 V	0.0100 V	0.0030 V	0.12 V	0.002 V	0.076 C	1.6 V	0.20 V
7/08/1982	0.0500 V	0.1680 V	0.2800 V	0.0020 V	0.0050 V	0.0100 V	N	N	N	N	N	N
7/12/1983	0.0250 V	0.1760 V	0.4100 V	0.0030 V	0.0050 V	0.0130 V	N	N	N	N	N	N
7/24/1984	0.0650 V	0.1270 V	0.2200 V	0.0010 V	0.0030 V	0.0070 V	N	N	N	N	N	N
7/30/1985	0.0410 V	0.1400 V	0.2700 V	0.0020 V	0.0050 V	0.0130 V	N	N	N	N	N	N
7/15/1986	0.0380 V	0.1300 V	0.2600 V	0.0010 V	0.0030 V	0.0100 V	N	N	N	N	N	N
7/15/1987	O	0.1200 V	0.1600 V	0.0010 V	0.0050 V	0.0080 V	N	N	N	N	N	N
7/13/1988	0.0410 T	0.1300 V	0.2300 V	O	0.0060 T	0.0140 V	N	N	N	N	1.9 V	N
7/19/1989	0.0250 T	0.1200 V	0.2100 V	0.0012 T	0.0040 T	0.0072 V	N	N	N	N	1.6 V	N
7/25/1990	0.0500 T	0.1100 V	0.2100 V	0.0005 W	0.0040 T	0.0090 V	N	N	N	N	2.0 V	0.20 T
7/09/1991	0.0300 T	0.1000 V	0.2000 V	0.0010 T	0.0040 T	0.0070 V	0.0020 T	0.15 V	0.022 V	0.040 V	1.6 V	0.20 W
7/08/1992	0.0370 T	0.0880 V	0.1600 V	0.0005 W	0.0020 W	0.0060 V	0.0060 T	0.13 V	0.044 V	0.050 V	1.5 V	0.20 W
7/06/1993	0.0260 T	0.0850 V	0.1800 V	0.0009 T	0.0040 T	0.0062 V	0.0020 T	0.14 V	0.014 V	0.035 V	1.8 V	0.40 T
7/04/1994	0.0350 T	0.1000 V	0.1800 V	0.0012 T	0.0040 T	0.0067 V	0.0040 T	0.12 V	0.020 V	0.035 V	2.0 V	0.20 T
7/12/1995	0.0200 W	0.1100 V	0.2400 V	0.0016 V	0.0040 T	0.0070 V	0.0040 T	0.08 T	0.012 V	0.085 V	0.8 V	0.20 W
7/08/1996	0.0200 W	0.1100 V	0.2600 V	0.0012 V	0.0040 T	0.0065 V	0.0020 W	0.10 V	0.014 V	0.005 W	0.7 V	0.20 W
7/07/1997	0.0271 V	0.0835 V	0.1540 V	0.0009 V	0.0039 V	0.0055 V	0.0035 V*	0.14 V	0.015 V	0.032 V	1.7 V	0.36 V
7/12/1998	0.0145 V	0.0662 V	0.0986 V	0.0008 D	0.0029 V	0.0047 V	0.0060 T	0.14 V	0.002 W	0.005 W	1.6 V	0.20 W
7/13/1999	0.0203 V	0.0505 V	0.0485 V	0.0008 D	0.0028 V	0.0038 V	0.0040 T	0.20 V	0.006 T	0.015 T	1.7 V	0.20 W
7/17/2000	0.0212 V	0.0586 V	0.0539 V	0.0008 D	0.0027 V	0.0041 V	0.0040 T	0.14 V	0.012 V	0.005 W	2.0 V	0.40 T
7/02/2001	0.0259 V	0.0821 V	0.0771 V	0.0009 V	0.0030 V	0.0044 V	0.0040 T	0.16 V	0.008 T	0.026 V	2.0 V	0.20 W
7/09/2002	0.0100 V	0.0647 V	0.0691 V	0.0012 V	0.0021 V	0.0034 V	0.0039 V*	0.13 V	N	0.026 V	1.9 V	O
7/24/2003	0.0375 V	0.0796 V	0.0886 V	0.0008 D	0.0033 V	0.0046 V	0.0056 V*	0.20 V	0.044 V	0.012 V	2.3 V	0.36 V
7/12/2004	0.0275 V	0.0864 V	0.0805 V	0.0008 D	0.0015 D	0.0041 V	0.0057 V*	0.11 V	0.010 V	0.018 V	2.0 V	0.30 V
7/07/2005	0.0370 V	0.0986 V	0.0470 V	0.0013 V	0.0026 V	0.0026 V	0.0028 V*	0.15 V	0.004 T	0.004 T	2.1 V	0.22 V

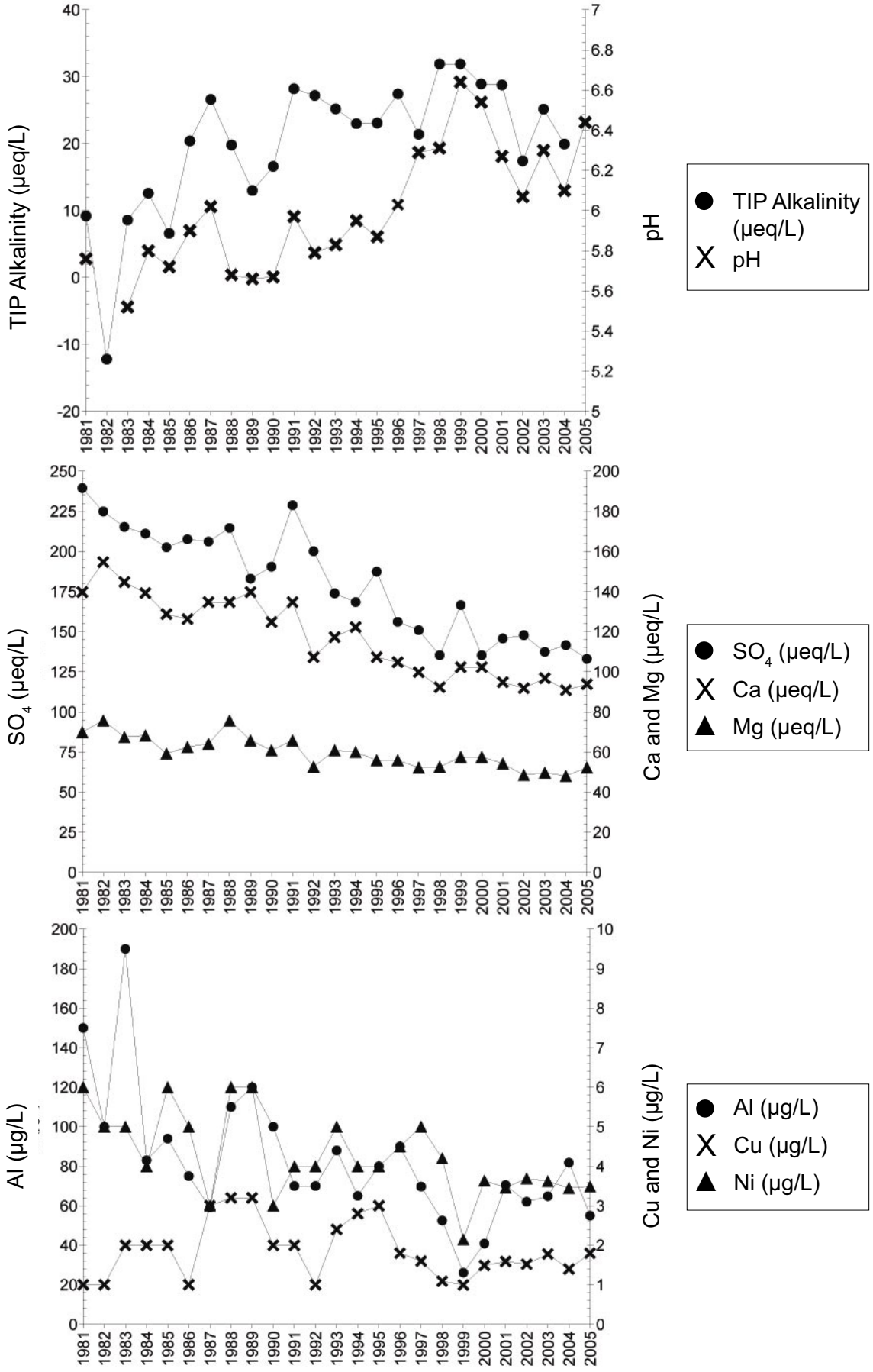
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Fraleck Lake



SES ID #	117	**Shoreline length (km)**	9.55
Township	Fraleck	**Maximum depth (m)**	23.2
Latitude	46°54’	**Mean depth (m)**	6.9
Longitude	80°53’	**Volume (x 10^4 m^3)**	1192
Distance from Sudbury (km)	48	**Area (ha)**	166.04
Elevation (m)	357	**Road access**	No
Watershed code	2DA03		

Fraleck Lake



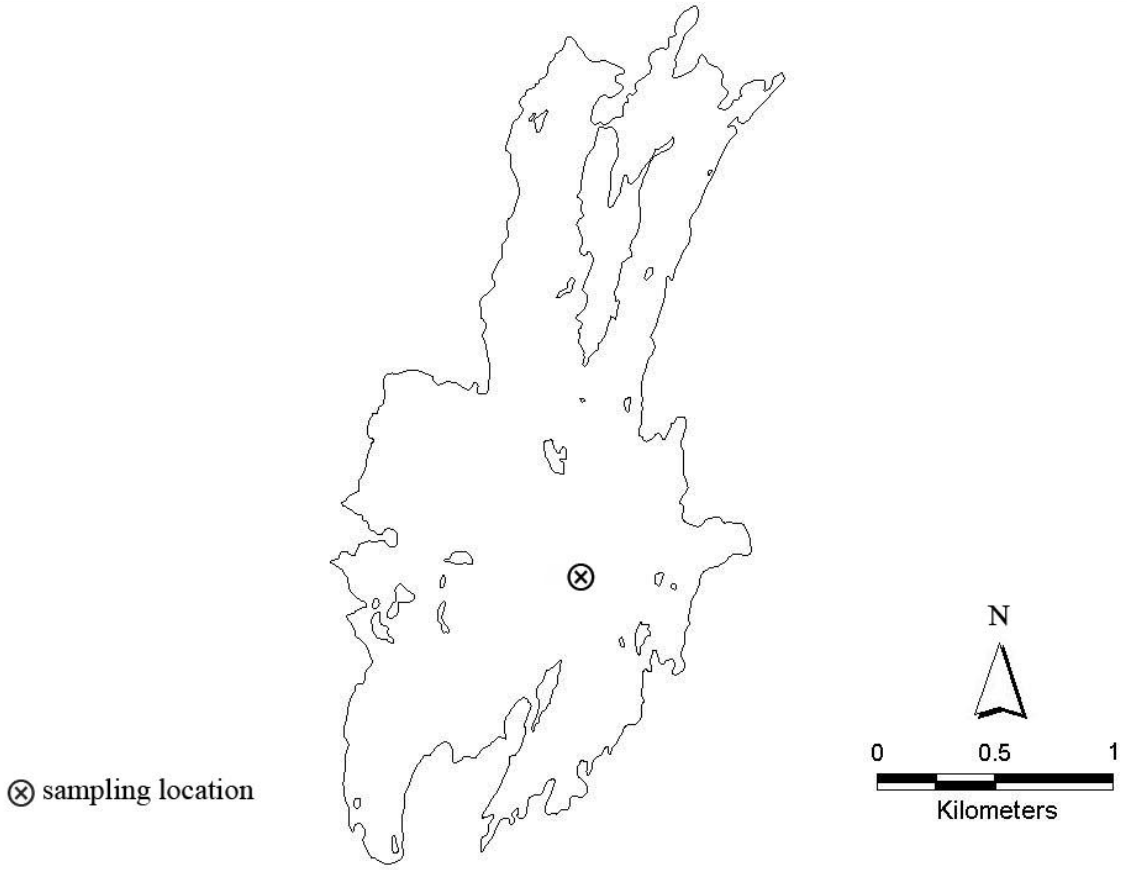
FRALECK SES # 117

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/21/1981	7.40 V	5.76 V	35.0 V	0.46 V	2.80 V	0.850 V	0.500 V	0.400 V	0.30 V	11.5 V	N	10.3 V	1.750 V
7/18/1982	5.00 V	O	37.0 V	-0.61 V	3.10 V	0.920 V	N	N	N	10.8 V	N	7.0 V	N
8/07/1983	7.00 V	5.52 V	35.0 V	0.43 V	2.90 V	0.820 V	0.900 V	0.460 V	0.27 V	10.3 V	N	10.5 V	2.150 V
7/23/1984	4.00 V	5.80 V	33.5 V	0.63 V	2.79 V	0.830 V	0.760 V	0.360 V	0.28 V	10.1 V	12.0 V	N	1.820 V
8/05/1985	4.50 V	5.72 V	33.0 V	0.33 V	2.58 V	0.720 V	0.680 V	0.400 V	0.28 V	9.7 V	14.0 V	N	1.940 V
7/21/1986	6.50 V	5.90 V	32.0 V	1.02 V	2.53 V	0.760 V	0.750 V	0.410 V	0.45 V	10.0 V	8.5 V	N	1.940 V
7/16/1987	4.50 V	6.02 V	31.5 V	1.33 V	2.70 V	0.780 V	0.840 V	0.340 V	0.25 V	9.9 V	10.0 V	N	1.840 V
7/21/1988	5.10 V	5.68 V	33.1 V	0.99 V	2.70 V	0.920 V	0.860 V	0.460 V	O	10.3 V	10.5 V	N	1.820 V
7/18/1989	3.90 V	5.66 V	31.5 V	0.65 V	2.80 V	0.800 V	0.820 V	0.380 V	0.30 T	8.8 V	14.0 V	N	2.240 V
7/16/1990	5.50 V	5.67 V	31.4 V	0.83 V	2.50 V	0.740 V	0.780 V	0.390 V	0.30 T	9.2 V	12.5 V	N	2.020 V
7/10/1991	5.30 V	5.97 V	30.3 V	1.41 C	2.70 V	0.800 V	1.180 V	O	0.30 T	11.0 V	9.0 V	N	1.920 V
7/08/1992	5.50 V	5.79 V	31.0 V	1.36 C	2.15 V	0.640 V	0.710 V	0.360 V	0.40 T	9.6 V	10.5 V	N	2.040 V
7/06/1993	3.50 V	5.83 V	29.7 V	1.26 V	2.35 V	0.740 V	0.770 V	0.381 V	0.20 T	8.4 V	15.4 V	N	2.000 V
7/25/1994	4.90 V	5.95 V	28.6 V	1.15 V	2.45 V	0.730 V	0.770 V	0.404 V	0.20 W	8.1 V	11.6 V	N	1.720 V
7/10/1995	N	5.87 V	27.0 V	1.16 C	2.15 V	0.680 V	0.760 V	0.380 V	0.40 T	9.0 V	15.2 V	N	1.760 V
7/08/1996	N	6.03 V	26.0 V	1.37 C	2.10 V	0.680 V	0.800 V	0.380 V	0.20 W	7.5 V	12.0 V	N	1.900 V
7/15/1997	N	6.29 V	24.7 V	1.07 V	2.00 V	0.635 V	0.740 V	0.310 V	0.16 V	7.3 V	16.4 V	N	1.980 V
7/13/1998	N	6.31 V	25.0 V	1.60 V	1.85 V	0.640 V	0.840 V	0.360 V	0.20 W	6.5 V	N	N	1.780 V
7/13/1999	N	6.64 V	27.6 V	1.60 V	2.05 V	0.700 V	0.820 V	0.360 V	0.20 W	8.0 V	N	N	1.660 V
7/17/2000	N	6.54 V	26.0 V	1.45 V	2.05 V	0.700 V	0.860 V	0.350 V	0.20 W	6.5 V	N	N	1.880 V
7/02/2001	N	6.27 V	27.7 V	1.44 V	1.90 V	0.660 V	0.840 V	0.370 V	0.20 W	7.0 V	N	N	1.720 V
7/09/2002	N	6.07 V	24.3 V	0.87 V	1.84 V	0.590 V	0.805 V	0.310 V	0.24 V	7.1 V	N	N	1.680 V
7/17/2003	4.00 V	6.30 V	22.6 V	1.26 V	1.94 V	0.605 V	0.800 V	0.335 V	0.20 V	6.6 V	N	N	1.420 V
7/12/2004	5.40 V	6.10 V	21.2 V	1.00 V	1.82 V	0.585 V	0.790 V	0.335 V	0.24 V	6.8 V	N	N	1.880 V
7/05/2005	4.75 V	6.44 V	22.0 V	N	1.88 V	0.635 V	0.815 V	0.360 V	0.24 V	6.4 V	N	N	1.680 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/21/1981	0.0500 V	0.0560 V	0.1500 V	0.0010 V	0.0060 V	0.0060 V	0.0040 V	0.19 V	0.022 V	0.026 C	2.8 V	0.40 V
7/18/1982	0.0800 V	0.0410 V	0.1000 V	0.0010 V	0.0050 V	0.0050 V	N	N	N	N	N	N
8/07/1983	0.0500 V	0.0570 V	0.1900 V	0.0020 V	0.0050 V	0.0080 V	N	N	N	N	N	N
7/23/1984	0.0750 V	0.0460 V	0.0830 V	0.0020 L	0.0040 V	0.0050 V	N	N	N	N	N	N
8/05/1985	0.0730 V	0.0540 V	0.0940 V	0.0020 V	0.0060 V	0.0080 V	N	N	N	N	N	N
7/21/1986	0.0510 V	0.0420 V	0.0750 V	0.0010 V	0.0050 V	0.0050 V	N	N	N	N	N	N
7/16/1987	0.0600 V	0.0270 V	0.0590 V	0.0030 V	0.0030 V	0.0050 V	N	N	N	N	N	N
7/21/1988	0.0700 T	0.0500 V	0.1100 V	0.0032 V	0.0060 T	0.0074 V	N	N	N	N	3.9 V	N
7/18/1989	0.0700 T	0.0570 V	0.1200 V	0.0032 V	0.0060 T	0.0070 V	N	N	N	N	3.5 V	N
7/16/1990	0.0600 T	0.0440 V	0.1000 T	0.0020 T	0.0030 T	0.0050 V	N	N	N	N	3.3 V	0.40 T
7/10/1991	0.0500 T	0.0470 V	0.0700 T	0.0020 T	0.0040 T	0.0050 V	0.0020 T	0.18 V	0.024 V	0.025 V	3.4 V	0.40 T
7/08/1992	0.0590 T	0.0430 V	0.0700 T	0.0010 T	0.0040 T	0.0050 V	0.0070 T	0.20 V	0.032 V	0.055 V	3.3 V	0.20 T
7/06/1993	0.0910 T	0.0420 V	0.0880 T	0.0024 T	0.0050 T	0.0040 V	0.0040 T	0.22 V	0.032 V	0.065 V	4.0 V	0.40 T
7/25/1994	0.0600 T	0.0340 V	0.0650 T	0.0028 V	0.0040 T	0.0040 V	0.0060 T	0.22 V	0.036 V	0.050 V	3.4 V	0.40 T
7/10/1995	0.0800 T	0.0490 V	0.0800 T	0.0030 V	0.0040 T	0.0035 V	0.0020 W	0.26 V	0.002 T	0.030 V	4.0 V	0.20 W
7/08/1996	0.0600 T	0.0490 V	0.0900 T	0.0018 V	0.0045 T	0.0035 V	0.0040 T	0.20 V	0.016 V	0.005 W	3.7 V	0.20 W
7/15/1997	0.0644 V	0.0266 V	0.0697 V	0.0016 V	0.0050 V	0.0030 V	O	0.20 V	0.010 V	0.024 V	3.8 V	0.28 V
7/13/1998	0.0629 V	0.0313 V	0.0525 V	0.0011 V	0.0042 V	0.0028 V	0.0080 T	0.18 V	0.004 T	0.005 W	3.6 V	0.60 T
7/13/1999	0.0508 V	0.0283 V	0.0261 V	0.0010 V	0.0022 V	0.0013 V	0.0040 T	0.20 V	0.004 T	0.030 V	3.2 V	0.20 W
7/17/2000	0.0404 V	0.0257 V	0.0409 V	0.0015 V	0.0036 V	0.0025 V	0.0080 T	0.20 V	0.004 T	0.041 V	4.3 V	0.60 T
7/02/2001	0.0834 V	0.0466 V	0.0705 V	0.0016 V	0.0035 V	0.0031 V	0.0060 T	0.28 V	0.016 V	0.052 V	4.6 V	0.40 T
7/09/2002	0.0397 V	0.0484 V	0.0620 V	0.0015 V	0.0037 V	0.0033 V	0.0041 V*	0.22 V	N	0.048 V	4.0 V	0.18 V
7/17/2003	0.0677 V	0.0344 V	0.0648 V	0.0018 V	0.0036 V	0.0068 V	0.0034 V*	0.20 V	0.026 V	0.022 V	4.6 V	0.38 V
7/12/2004	0.0887 V	0.0299 V	0.0818 V	0.0014 V	0.0035 V	0.0033 V	0.0055 V*	0.18 V	0.014 V	0.040 V	4.0 V	0.40 V
7/05/2005	0.0924 V	0.0276 V	0.0550 V	0.0018 V	0.0035 V	0.0018 V	0.0028 V*	0.24 V	N	N	3.7 V	0.60 V

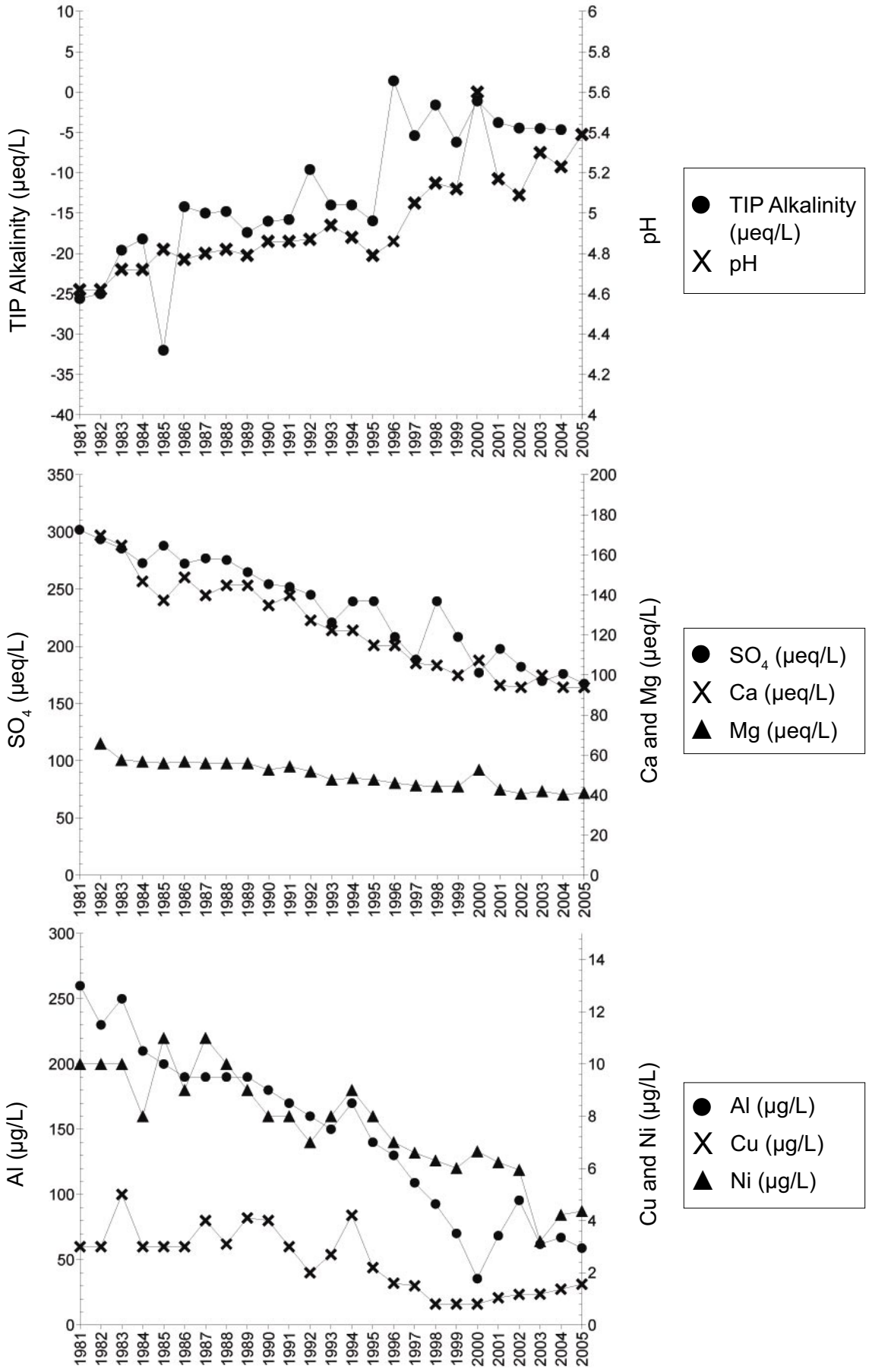
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Frederick Lake



SES ID #	123	**Shoreline length (km)**	15.89
Township	Stobie	**Maximum depth (m)**	21.0
Latitude	47°02’	**Mean depth (m)**	7.5
Longitude	80°41’	**Volume (x 10^4 m^3)**	2549
Distance from Sudbury (km)	69	**Area (ha)**	311.02
Elevation (m)	326	**Road access**	No
Watershed code	2DC01		

Frederick Lake



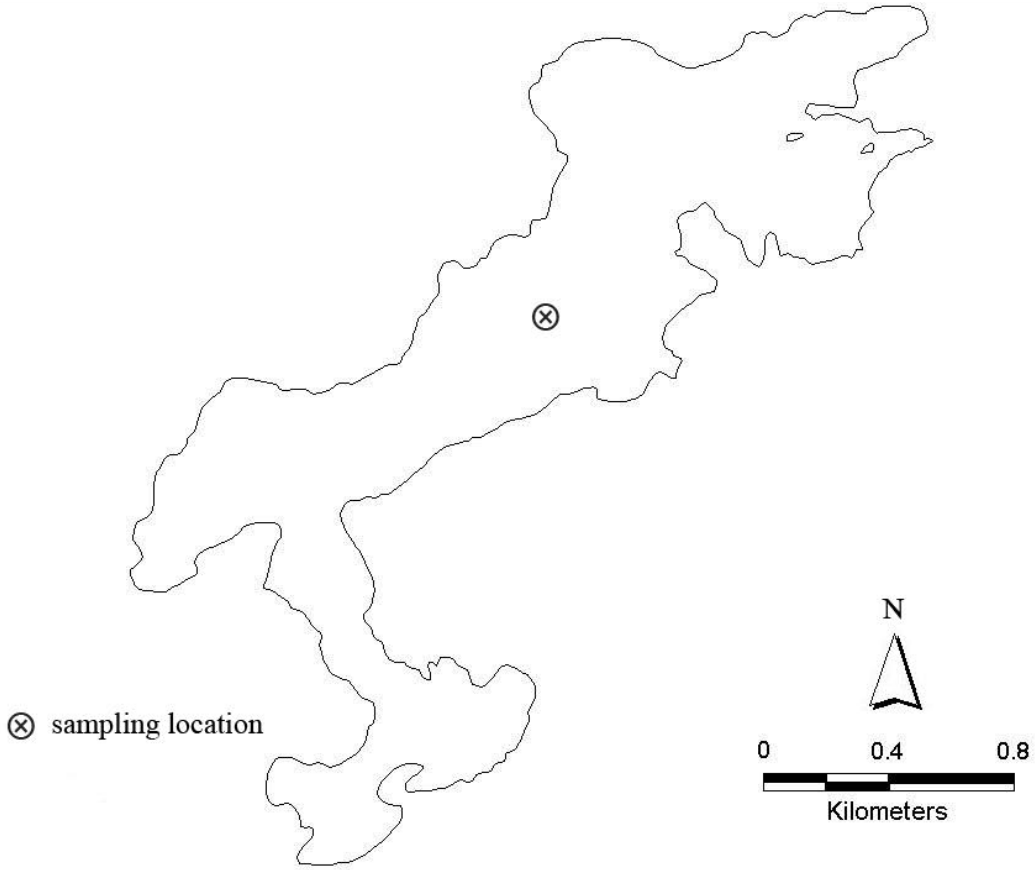
FREDERICK SES # 123

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	N	4.62 V	46.0 V	-1.28 V	O	O	0.700 V	0.500 V	0.30 V	14.5 V	N	1.8 V	0.350 V
7/18/1982	11.50 V	4.62 V	45.0 V	-1.25 V	3.40 V	0.800 V	N	N	N	14.1 V	N	0.3 V	N
7/12/1983	10.00 V	4.72 V	41.2 V	-0.98 V	3.30 V	0.700 V	0.600 V	0.360 V	0.48 V	13.7 V	N	4.8 V	0.430 V
7/23/1984	10.00 V	4.72 V	42.5 V	-0.91 V	2.94 V	0.690 V	0.590 V	0.310 V	0.23 V	13.1 V	2.0 V	N	0.360 V
8/05/1985	9.00 V	4.82 V	41.0 V	-1.60 V	2.75 V	0.680 V	0.650 V	0.330 V	0.17 T	13.8 V	1.0 V	N	0.430 V
7/21/1986	10.00 V	4.77 V	40.0 V	-0.71 V	2.98 V	0.690 V	0.600 V	0.320 V	0.40 V	13.1 V	1.0 T	N	0.520 V
7/16/1987	10.60 V	4.80 V	41.0 V	-0.75 V	2.80 V	0.680 V	0.660 V	0.320 V	0.35 V	13.3 V	0.5 W	N	0.360 V
7/20/1988	9.50 V	4.82 V	40.4 V	-0.74 V	2.90 V	0.680 V	0.640 V	0.380 V	O	13.2 V	1.5 T	N	0.280 V
7/18/1989	10.00 V	4.79 V	38.8 V	-0.87 V	2.90 V	0.680 V	0.620 V	0.330 V	0.20 T	12.7 V	1.5 T	N	0.560 V
7/16/1990	9.30 V	4.86 V	39.6 V	-0.80 V	2.70 V	0.640 V	0.640 V	0.350 V	0.30 T	12.2 V	1.5 T	N	0.400 V
7/09/1991	8.90 V	4.86 V	37.2 V	-0.79 C	2.80 V	0.660 V	0.700 V	0.360 V	0.20 T	12.1 V	0.5 T	N	0.400 V
7/14/1992	11.50 V	4.87 V	36.0 V	-0.48 C	2.55 V	0.630 V	0.610 V	0.296 V	0.30 T	11.8 V	1.0 T	N	0.320 V
7/13/1993	8.50 V	4.94 V	34.9 V	-0.70 V	2.45 V	0.580 V	0.600 V	0.295 V	0.20 W	10.6 V	0.4 T	N	0.420 V
7/25/1994	9.50 V	4.88 V	34.4 V	-0.70 V	2.45 V	0.590 V	0.610 V	0.301 V	0.20 W	11.5 V	0.8 T	N	0.340 V
7/10/1995	N	4.79 V	32.0 V	-0.80 C	2.30 V	0.580 V	0.600 V	0.290 V	0.40 T	11.5 V	2.6 V	N	0.480 V
7/08/1996	N	4.86 V	30.0 V	0.07 C	2.30 V	0.560 V	0.640 V	0.270 V	0.40 T	10.0 V	2.0 V	N	0.440 V
7/15/1997	N	5.05 V	30.0 V	-0.27 V	2.12 V	0.545 V	0.575 V	0.245 V	0.21 V	9.1 V	1.2 V	N	0.560 V
7/12/1998	N	5.15 V	28.5 V	-0.08 V	2.10 V	0.540 V	0.640 V	0.270 V	0.20 W	11.5 V	N	N	0.460 V
7/13/1999	N	5.12 V	28.9 V	-0.31 V	2.00 V	0.540 V	0.640 V	0.270 V	0.20 W	10.0 V	N	N	0.220 V
7/17/2000	N	5.60 V	27.5 V	-0.05 V	2.15 V	0.640 V	0.700 V	0.310 V	0.20 W	8.5 V	N	N	0.600 V
7/02/2001	N	5.17 V	28.2 V	-0.19 V	1.90 V	0.520 V	0.640 V	0.250 V	0.20 W	9.5 V	N	N	0.120 V
7/09/2002	N	5.09 V	27.3 V	-0.22 V	1.88 V	0.495 V	0.620 V	0.220 V	0.23 V	8.8 V	N	N	0.380 V
7/24/2003	10.40 V	5.30 V	34.0 V	-0.23 V	2.00 V	0.510 V	0.650 V	0.245 V	0.23 V	8.2 V	N	N	0.500 V
7/13/2004	12.40 V	5.23 V	23.4 V	-0.23 V	1.88 V	0.490 V	0.700 V	0.340 V	0.28 V	8.5 V	N	N	0.500 V
7/07/2005	9.00 V	5.39 V	23.4 V	N	1.88 V	0.500 V	0.635 V	0.230 V	0.21 V	8.1 V	N	N	0.360 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0300 V	0.2200 V	0.2600 V	0.0030 V	0.0100 V	0.0100 V	0.0040 V	0.08 V	0.026 V	0.066 C	0.8 V	0.40 V
7/18/1982	0.0200 T	0.2440 V	0.2300 V	0.0030 V	0.0100 V	0.0150 V	N	N	N	N	N	N
7/12/1983	0.0250 V	0.2150 V	0.2500 V	0.0050 V	0.0100 V	0.0110 V	N	N	N	N	N	N
7/23/1984	0.0450 V	0.2050 V	0.2100 V	0.0030 V	0.0080 V	0.0100 V	N	N	N	N	N	N
8/05/1985	0.0310 V	0.2200 V	0.2000 V	0.0030 V	0.0110 V	0.0120 V	N	N	N	N	N	N
7/21/1986	0.0250 V	0.1800 V	0.1900 V	0.0030 V	0.0090 V	0.0080 V	N	N	N	N	N	N
7/16/1987	0.1000 V	0.1800 V	0.1900 V	0.0040 V	0.0110 V	0.0200 V	N	N	N	N	N	N
7/20/1988	0.1100 V	0.2000 V	0.1900 V	0.0031 V	0.0100 T	0.0096 V	N	N	N	N	0.8 V	N
7/18/1989	0.0250 T	0.1800 V	0.1900 V	0.0041 V	0.0090 T	0.0092 V	N	N	N	N	0.7 V	N
7/16/1990	0.0300 T	0.1700 V	0.1800 V	0.0040 V	0.0080 T	0.0090 V	N	N	N	N	0.8 V	0.20 W
7/09/1991	0.0200 W	0.1600 V	0.1700 V	0.0030 V	0.0080 T	0.0070 V	0.0020 W	0.09 T	0.016 V	0.065 V	0.7 V	0.20 W
7/14/1992	0.0230 T	0.1600 V	0.1600 V	0.0020 T	0.0070 T	0.0070 V	0.0050 T	0.10 V	0.012 V	0.070 V	0.7 V	0.20 W
7/13/1993	0.0220 T	0.1300 V	0.1500 V	0.0027 V	0.0080 T	0.0054 V	0.0100 V	0.12 V	0.020 V	0.050 V	0.8 V	0.20 T
7/25/1994	0.0250 T	0.1700 V	0.1700 V	0.0042 V	0.0090 T	0.0076 V	0.0040 T	0.10 V	0.034 V	0.045 V	0.8 V	0.20 W
7/10/1995	0.0200 W	0.1400 V	0.1400 V	0.0022 V	0.0080 V	0.0065 V	0.0020 W	0.10 V	0.014 V	0.020 T	0.9 V	0.20 W
7/08/1996	0.0200 W	0.1200 V	0.1300 V	0.0016 V	0.0070 V	0.0055 V	0.0020 W	0.14 V	0.012 V	0.005 W	0.8 V	0.20 W
7/15/1997	0.0244 V	0.1110 V	0.1090 V	0.0015 V	0.0066 V	0.0047 V	0.0018 V*	0.10 V	0.016 V	0.042 V	1.0 V	0.16 V
7/12/1998	0.0137 V	0.0992 V	0.0927 V	0.0008 D	0.0063 V	0.0048 V	0.0020 W	0.14 V	0.002 W	0.015 T	0.9 V	0.20 W
7/13/1999	0.0062 V	0.0872 V	0.0702 V	0.0008 D	0.0060 V	0.0043 V	0.0020 W	0.08 T	0.004 T	0.015 T	1.2 V	0.20 W
7/17/2000	0.0063 V	0.0598 V	0.0355 V	0.0008 D	0.0067 V	0.0041 V	0.0020 W	0.10 V	0.012 V	0.058 V	1.2 V	0.20 W
7/02/2001	0.0061 V	0.0731 V	0.0684 V	0.0010 V	0.0062 V	0.0046 V	0.0020 W	0.12 V	0.014 V	0.010 T	1.5 V	0.20 W
7/09/2002	0.0104 V	0.0784 V	0.0955 V	0.0012 V	0.0059 V	0.0041 V	0.0028 V*	0.24 V	N	0.022 V	1.2 V	0.04 O
7/24/2003	0.0069 V	0.0510 V	0.0619 V	0.0012 V	0.0032 V	0.0067 V	0.0025 V*	0.19 V	0.018 V	0.002 W	1.3 V	0.30 V
7/13/2004	0.0072 V	0.0488 V	0.0670 V	0.0014 V	0.0042 V	0.0031 V	0.0049 V*	0.23 V	0.010 V	0.010 V	1.2 V	0.18 V
7/07/2005	0.0110 V	0.0486 V	0.0589 V	0.0016 V	0.0044 V	0.0040 V	0.0019 V*	0.13 V	0.004 T	0.008 T	1.6 V	0.16 V

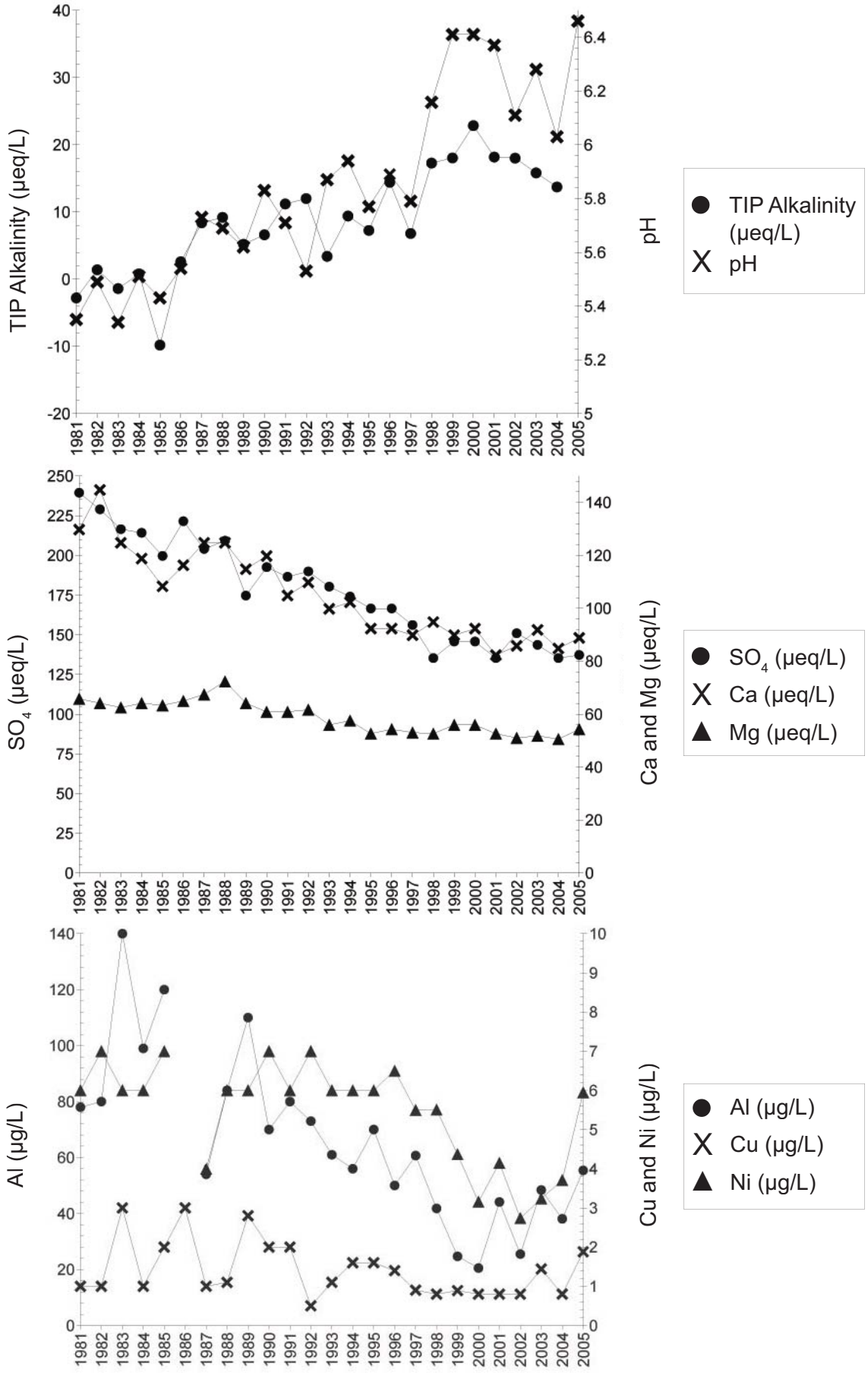
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

George Lake



SES ID #	80	**Shoreline length (km)**	13.46
Township	Killarney	**Maximum depth (m)**	39.7
Latitude	46°01’	**Mean depth (m)**	18.6
Longitude	81°24’	**Volume (x 10^4 m^3)**	2745
Distance from Sudbury (km)	60	**Area (ha)**	188.53
Elevation (m)	189	**Road access**	Yes
Watershed code	2CF03		

George Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

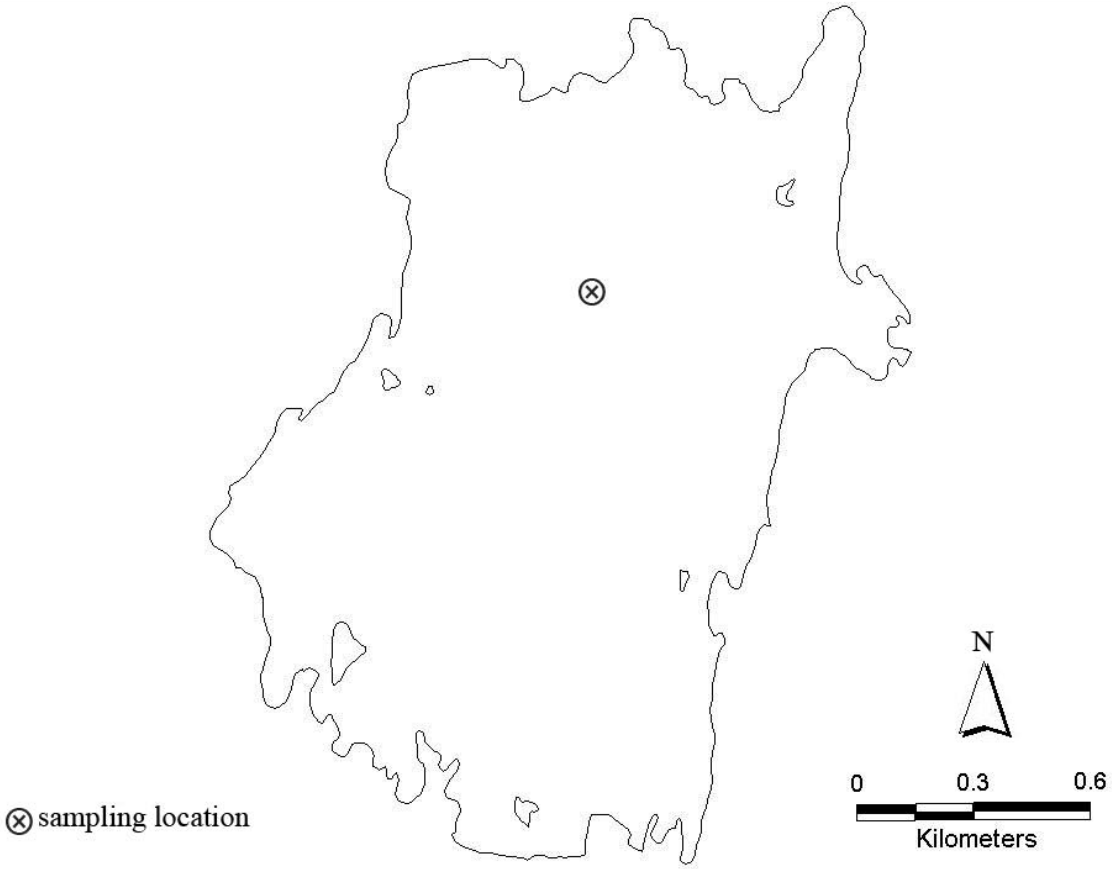
GEORGE SES # 80

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	13.40 V	5.35 V	35.0 V	-0.14 V	2.60 V	0.800 V	0.700 V	0.400 V	0.60 V	11.5 V	N	1.8 V	1.050 V
7/27/1982	12.50 V	5.49 V	35.0 V	0.07 V	2.90 V	0.780 V	N	N	N	11.0 V	N	0.2 V	N
8/04/1983	10.00 V	5.34 V	34.2 V	-0.07 V	2.50 V	0.760 V	0.850 V	0.540 V	0.63 V	10.4 V	N	3.1 V	0.960 V
7/19/1984	10.00 V	5.51 V	34.2 V	0.04 V	2.38 V	0.780 V	0.690 V	0.360 V	0.24 V	10.3 V	2.0 V	N	1.070 V
7/30/1985	12.00 V	5.43 V	34.0 V	-0.49 V	2.17 V	0.770 V	0.710 V	0.370 V	0.26 V	9.6 V	2.0 V	N	1.150 V
7/14/1986	5.00 V	5.54 V	31.0 V	0.13 V	2.33 V	0.790 V	0.630 V	0.360 V	0.75 V	10.6 V	1.5 T	N	1.100 V
7/23/1987	9.50 V	5.73 V	30.5 V	0.42 V	2.50 V	0.820 V	0.700 V	0.370 V	0.45 V	9.8 V	1.5 T	N	1.020 V
6/28/1988	N	5.69 V	30.5 V	0.46 V	2.50 V	0.880 V	0.720 V	0.410 V	0.80 T	10.1 V	2.0 T	N	1.020 V
7/04/1989	11.30 V	5.62 V	30.7 V	0.26 V	2.30 V	0.780 V	0.720 V	0.410 V	0.60 T	8.4 V	2.0 T	N	1.200 V
7/05/1990	9.20 V	5.83 V	30.0 V	0.33 V	2.40 V	0.740 V	0.760 V	0.420 V	0.60 T	9.3 V	2.5 V	N	1.100 V
7/10/1991	10.20 V	5.71 V	29.2 V	0.56 C	2.10 V	0.740 V	0.700 V	0.390 V	0.60 T	9.0 V	2.0 V	N	1.140 V
7/06/1992	7.60 V	5.53 V	28.8 V	0.60 C	2.20 V	0.750 V	0.760 V	0.350 V	0.50 T	9.1 V	2.0 V	N	1.080 V
7/21/1993	7.10 V	5.87 V	27.2 V	0.17 V	2.00 V	0.680 V	0.680 V	0.329 V	0.30 T	8.7 V	1.8 V	N	1.140 V
7/12/1994	9.00 V	5.94 V	26.0 V	0.47 V	2.05 V	0.700 V	0.690 V	0.340 V	0.40 T	8.4 V	2.0 V	N	1.120 V
7/04/1995	N	5.77 V	26.8 V	0.36 C	1.85 V	0.640 V	0.720 V	0.350 V	0.40 T	8.0 V	1.2 V	N	1.080 V
7/03/1996	N	5.89 V	27.0 V	0.72 C	1.85 V	0.660 V	0.700 V	0.350 V	0.40 T	8.0 V	2.8 V	N	1.100 V
7/08/1997	N	5.79 V	20.6 V	0.34 V	1.80 V	0.645 V	0.630 V	0.290 V	0.38 V	7.5 V	3.6 V	N	1.160 V
7/07/1998	N	6.16 V	24.2 V	0.86 V	1.90 V	0.640 V	0.640 V	0.310 V	0.40 T	6.5 V	N	N	1.000 V
7/07/1999	N	6.41 V	25.3 V	0.90 V	1.80 V	0.680 V	0.860 V	0.380 V	0.60 T	7.0 V	N	N	1.000 V
7/05/2000	N	6.41 V	25.0 V	1.14 V	1.85 V	0.680 V	0.700 V	0.320 V	0.60 T	7.0 V	N	N	O
7/05/2001	N	6.37 V	25.0 V	0.91 V	1.65 V	0.640 V	0.720 V	0.330 V	0.60 T	6.5 V	N	N	0.880 V
7/08/2002	N	6.11 V	23.7 V	0.90 V	1.72 V	0.620 V	0.695 V	0.285 V	0.42 V	7.3 V	N	N	0.840 V
7/14/2003	6.00 V	6.28 V	21.8 V	0.79 V	1.84 V	0.630 V	0.750 V	0.345 V	O	6.9 V	N	N	0.840 V
7/05/2004	10.00 V	6.03 V	22.0 V	0.69 V	1.70 V	0.615 V	0.670 V	0.320 V	0.48 V	6.5 V	N	N	1.040 V
7/12/2005	9.25 V	6.46 V	24.0 V	N	1.78 V	0.660 V	0.725 V	0.325 V	0.50 V	6.6 V	2.4 V	N	1.000 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0400 V	0.1260 V	0.0780 V	0.0010 L	0.0060 V	0.0150 V	0.0030 V	0.12 V	0.024 V	0.116 C	1.1 V	0.40 V
7/27/1982	0.0150 T	0.1170 V	0.0800 V	0.0010 L	0.0070 V	0.0170 V	N	N	N	N	N	N
8/04/1983	0.0150 V	0.1100 V	0.1400 V	0.0030 V	0.0060 V	0.0260 V	N	N	N	N	N	N
7/19/1984	0.0300 T	0.1200 V	0.0990 V	0.0010 V	0.0060 V	0.0190 V	N	N	N	N	N	N
7/30/1985	0.0160 V	0.1200 V	0.1200 V	0.0020 V	0.0070 V	0.0220 V	N	N	N	N	N	N
7/14/1986	0.0400 L	0.0790 V	O	0.0030 L	O	0.0040 V	N	N	N	N	N	N
7/23/1987	0.0760 V	0.1300 V	0.0540 V	0.0010 W	0.0040 V	0.0010 W	N	N	N	N	N	N
6/28/1988	0.0210 T	0.1200 V	0.0840 T	0.0011 T	0.0060 T	0.0120 V	N	N	N	N	1.7 V	N
7/04/1989	0.0430 T	0.1200 V	0.1100 V	0.0028 V	0.0060 T	0.0180 V	N	N	N	N	1.7 V	N
7/05/1990	0.0200 W	0.1200 V	0.0700 T	0.0020 T	0.0070 T	0.0110 V	0.0030 T	0.14 V	0.010 V	0.080 V	1.4 V	0.20 T
7/10/1991	0.0200 W	0.1300 V	0.0800 T	0.0020 T	0.0060 T	0.0150 V	0.0030 T	0.17 V	0.018 V	0.080 V	1.6 V	0.20 T
7/06/1992	O	0.1500 V	0.0730 T	0.0005 W	0.0070 T	0.0130 V	0.0080 T	0.16 V	0.024 V	0.090 V	1.4 V	0.20 W
7/21/1993	0.0200 W	0.1100 V	0.0610 T	0.0011 T	0.0060 T	0.0110 V	0.0040 T	0.18 V	0.006 T	0.080 V	1.6 V	0.20 T
7/12/1994	0.0200 W	0.1200 V	0.0560 T	0.0016 T	0.0060 T	0.0160 V	0.0020 T	0.16 V	0.032 V	0.120 V	1.4 V	0.40 T
7/04/1995	0.0400 T	0.1300 V	0.0700 T	0.0016 V	0.0060 V	0.0120 V	O	0.16 V	0.012 V	0.075 V	1.8 V	0.20 W
7/03/1996	0.0200 W	0.1300 V	0.0500 T	0.0014 V	0.0065 V	0.0150 V	0.0020 W	0.20 V	0.038 V	0.080 V	1.3 V	0.20 W
7/08/1997	0.0164 V	0.0976 V	0.0607 V	0.0009 V	0.0055 V	0.0111 V	0.0041 V*	0.16 V	0.033 V	0.100 V	1.6 V	0.44 V
7/07/1998	0.0216 V	0.0862 V	0.0418 V	0.0008 D	0.0055 V	0.0099 V	0.0040 T	0.16 V	0.004 T	0.050 V	1.7 V	0.40 T
7/07/1999	0.0153 V	0.0820 V	0.0247 V	0.0009 V	0.0044 V	0.0077 V	0.0040 T	0.16 V	0.010 V	0.040 V	1.9 V	0.60 T
7/05/2000	0.0098 V	0.0584 V	0.0205 V	0.0008 D	0.0032 V	0.0062 V	0.0020 W	0.12 V	0.012 V	0.037 V	1.7 V	0.20 W
7/05/2001	0.0147 V	0.0663 V	0.0441 V	0.0008 D	0.0042 V	0.0079 V	0.0060 T	0.16 V	0.012 V	0.064 V	1.9 V	0.40 T
7/08/2002	0.0102 V	0.0604 V	0.0255 V	0.0008 D	0.0027 V	0.0063 V	0.0043 V*	0.24 V	N	0.080 V	1.5 V	0.28 V
7/14/2003	0.0186 V	0.0694 V	0.0484 V	0.0014 V	0.0032 V	0.0102 V	0.0038 V*	0.19 V	0.044 V	0.058 V	2.2 V	0.34 V
7/05/2004	0.0116 V	0.0499 V	0.0381 V	0.0008 D	0.0037 V	0.0065 V	0.0034 V*	0.08 V	0.022 V	0.080 V	1.3 V	0.50 V
7/12/2005	0.0336 V	0.0527 V	0.0554 V	0.0019 V	0.0060 V	0.0058 V	0.0029 V*	0.14 V	0.002 W	0.062 V	1.5 V	0.34 V

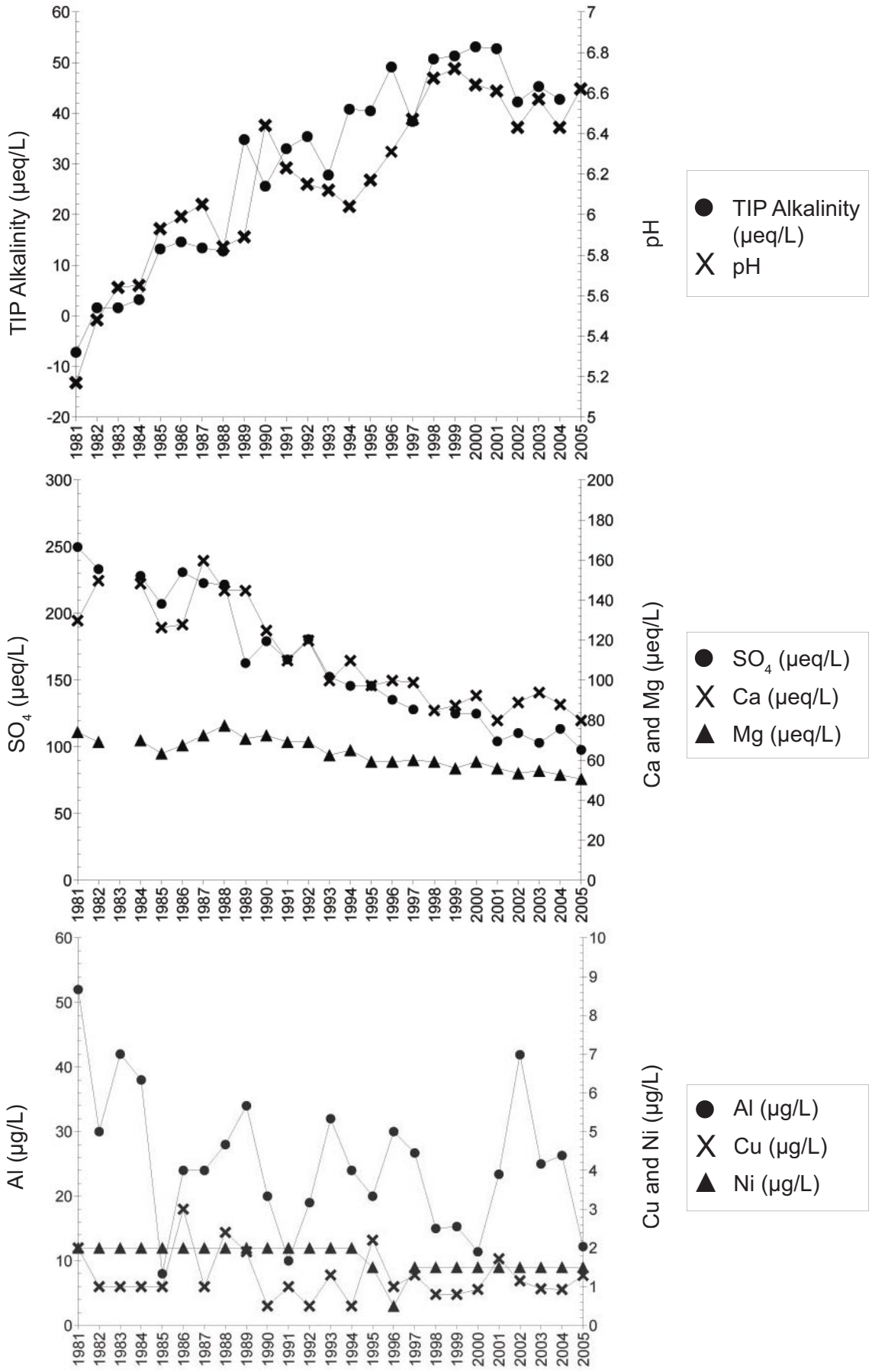
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Gullrock Lake



SES ID #	180	**Shoreline length (km)**	9.75
Township	Brigstocke	**Maximum depth (m)**	12.7
Latitude	47°18’	**Mean depth (m)**	4.1
Longitude	79°56’	**Volume (x 10^4 m^3)**	951
Distance from Sudbury (km)	123	**Area (ha)**	225.32
Elevation (m)	325	**Road access**	No
Watershed code	2JD01		

Gullrock Lake



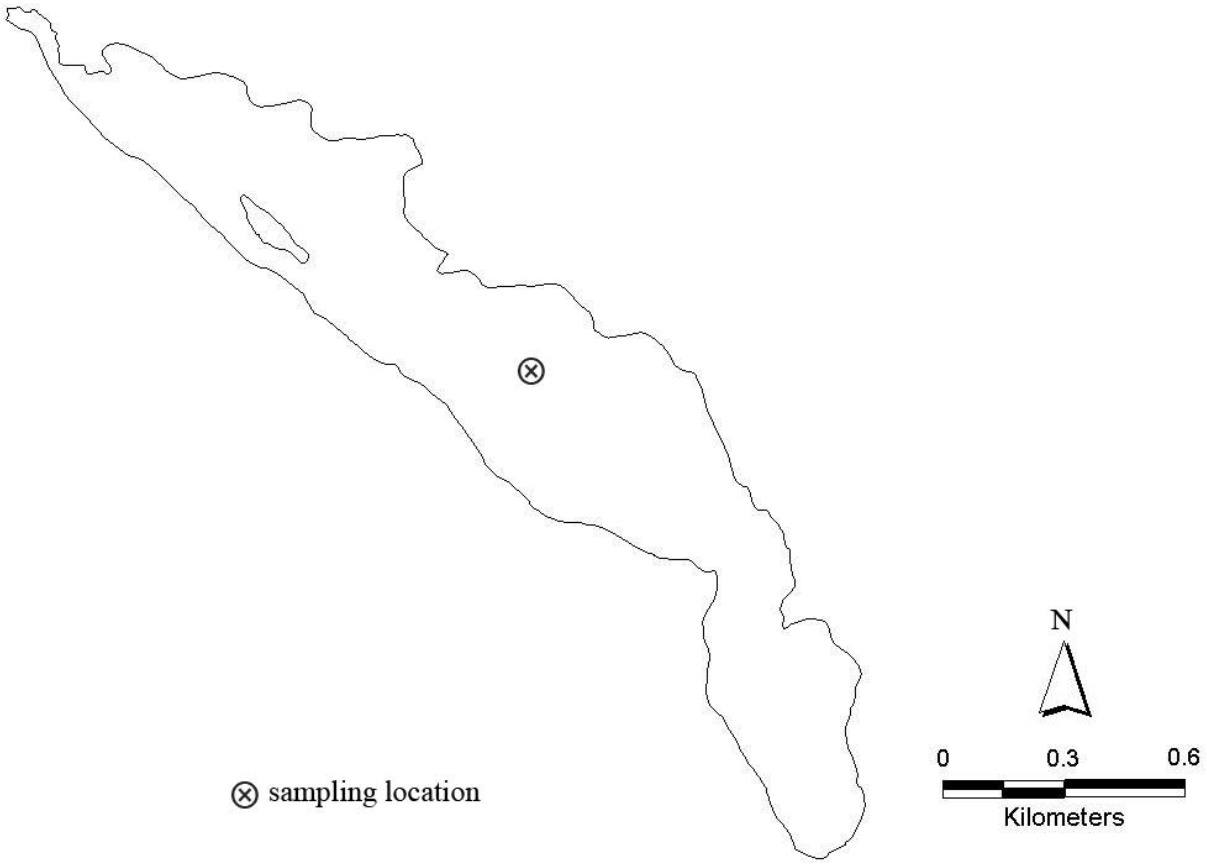
GULLROCK SES # 180

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/01/1981	8.20 V	5.17 V	38.0 V	-0.36 V	2.60 V	0.900 V	0.500 V	0.250 V	0.20 V	12.0 V	N	N	0.150 V
6/29/1982	4.50 V	5.48 V	35.0 V	0.08 V	3.00 V	0.840 V	N	N	N	11.2 V	N	1.5 V	N
7/10/1983	4.00 V	5.64 V	35.4 V	0.08 V	N	N	N	N	N	N	N	N	N
7/25/1984	4.00 V	5.65 V	34.0 V	0.16 V	2.97 V	0.850 V	0.560 V	0.230 V	0.20 V	11.0 V	5.5 V	N	0.200 V
8/20/1985	5.50 V	5.93 V	32.0 V	0.66 V	2.53 V	0.770 V	0.520 V	0.260 V	0.17 T	10.0 V	5.5 V	N	0.060 T
7/15/1986	6.00 V	5.99 V	32.0 V	0.73 V	2.56 V	0.820 V	0.640 V	0.270 V	0.45 V	11.1 V	3.5 V	N	0.200 V
7/14/1987	5.00 V	6.05 V	34.0 V	0.67 V	3.20 V	0.880 V	0.660 V	0.260 V	0.30 V	10.7 V	2.0 T	N	0.140 V
7/13/1988	4.20 V	5.84 V	32.4 V	0.64 V	2.90 V	0.940 V	0.680 V	0.290 V	0.40 T	10.7 V	4.0 V	N	0.200 V
7/19/1989	6.40 V	5.89 V	30.5 V	1.74 V	2.90 V	0.860 V	0.660 V	0.300 V	0.20 T	7.8 V	11.0 V	N	0.440 V
7/19/1990	4.50 V	6.44 V	28.0 V	1.28 V	2.50 V	0.880 V	0.620 V	0.240 V	0.20 T	8.6 V	4.5 V	N	0.220 T
7/08/1991	6.00 V	6.23 V	27.1 V	1.65 C	2.20 V	0.840 V	0.520 V	0.210 V	0.20 T	8.0 V	4.5 V	N	0.120 T
7/06/1992	3.00 V	6.15 V	27.2 V	1.77 C	2.40 V	0.840 V	0.640 V	0.230 V	0.30 T	8.7 V	4.0 V	N	0.140 V
7/07/1993	5.00 V	6.12 V	26.0 V	1.39 V	2.00 V	0.760 V	0.600 V	0.226 V	0.20 T	7.3 V	6.8 V	N	0.220 V
7/04/1994	5.70 V	6.04 V	26.3 V	2.04 V	2.20 V	0.790 V	0.600 V	0.229 V	0.20 T	7.0 V	7.8 V	N	0.240 V
7/12/1995	N	6.17 V	26.0 V	2.02 C	1.95 V	0.720 V	0.600 V	0.240 V	0.20 W	7.0 V	6.4 V	N	0.240 V
7/08/1996	N	6.31 V	24.0 V	2.46 C	2.00 V	0.720 V	0.600 V	0.210 V	0.40 T	6.5 V	7.0 V	N	0.260 V
7/07/1997	N	6.47 V	23.1 V	1.92 V	1.98 V	0.730 V	0.570 V	0.195 V	0.19 V	6.2 V	9.4 V	N	0.300 V
7/12/1998	N	6.67 V	22.5 V	2.54 V	1.70 V	0.720 V	0.680 V	0.220 V	0.20 W	O	N	N	0.200 V
7/13/1999	N	6.72 V	23.8 V	2.57 V	1.75 V	0.680 V	0.620 V	0.210 V	0.20 W	6.0 V	N	N	0.040 T
7/17/2000	N	6.64 V	22.5 V	2.66 V	1.85 V	0.720 V	0.620 V	0.200 V	0.20 W	6.0 V	N	N	0.120 V
7/02/2001	N	6.61 V	24.1 V	2.64 V	1.60 V	0.680 V	0.660 V	0.250 V	0.40 T	5.0 V	N	N	0.220 V
7/09/2002	N	6.43 V	20.3 V	2.11 V	1.78 V	0.650 V	0.580 V	0.175 V	0.28 V	5.3 V	N	N	0.360 V
7/22/2003	3.90 V	6.57 V	27.2 V	2.26 V	1.88 V	0.665 V	0.640 V	0.205 V	0.19 V	5.0 V	N	N	0.180 V
7/12/2004	5.50 V	6.43 V	18.6 V	2.14 V	1.76 V	0.640 V	0.620 V	0.185 V	0.23 V	5.5 V	N	N	0.220 V
7/28/2005	5.30 V	6.62 V	20.6 V	N	1.60 V	0.615 V	0.550 V	0.215 V	0.07 V	4.7 V	8.4 V	N	0.060 T

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
7/01/1981	0.0100 V	0.1080 V	0.0520 V	0.0020 V	0.0020 L	0.0120 V	0.0040 V	0.13 V	0.016 V	0.006 C	1.5 V	0.20 V
6/29/1982	0.0450 V	0.0720 V	0.0300 V	0.0010 L	0.0020 V	0.0090 L	N	N	N	N	N	N
7/10/1983	N	N	0.0420 V	0.0010 V	0.0020 V	0.0090 V	N	N	N	N	N	N
7/25/1984	0.0550 V	0.0530 V	0.0380 V	0.0010 L	0.0020 V	0.0100 V	N	N	N	N	N	N
8/20/1985	0.0440 V	0.0440 V	0.0080 V	0.0010 V	0.0020 L	0.0060 V	N	N	N	N	N	N
7/15/1986	0.0300 V	0.0330 V	0.0240 V	0.0030 V	0.0020 L	0.0090 V	N	N	N	N	N	N
7/14/1987	0.0320 V	0.0440 V	0.0240 V	0.0010 V	0.0020 L	0.0120 V	N	N	N	N	N	N
7/13/1988	0.0510 T	0.0350 V	0.0280 T	0.0024 T	0.0020 W	0.0068 V	N	N	N	N	2.7 V	N
7/19/1989	O	0.0440 V	0.0340 T	0.0019 T	0.0020 W	0.0047 V	N	N	N	N	2.8 V	N
7/19/1990	0.0500 T	0.0210 V	0.0200 T	0.0005 W	0.0020 W	0.0030 V	N	N	N	N	2.6 V	0.60 T
7/08/1991	0.0400 T	0.0140 V	0.0100 W	0.0010 T	0.0020 W	0.0020 T	0.0080 T	0.24 V	0.014 V	0.005 T	2.9 V	0.20 T
7/06/1992	0.0470 T	0.0110 V	0.0190 T	0.0005 W	0.0020 W	0.0030 V	0.0070 T	0.25 V	0.018 V	0.005 T	3.0 V	0.20 T
7/07/1993	0.0480 T	0.0230 V	0.0320 T	0.0013 T	0.0020 W	0.0015 T	0.0060 T	0.26 V	0.022 V	0.015 T	3.4 V	0.40 T
7/04/1994	O	0.0520 V	0.0240 T	0.0005 W	0.0020 W	0.0020 T	0.0080 T	0.30 V	0.072 V	0.005 T	3.4 V	0.80 T
7/12/1995	0.0400 T	0.0280 V	0.0200 T	0.0022 V	0.0015 T	0.0025 V	0.0040 T	0.30 V	0.032 V	0.005 T	3.9 V	0.60 T
7/08/1996	0.0200 W	0.0160 V	0.0300 T	0.0010 V	0.0005 W	0.0005 W	0.0060 T	0.28 V	0.012 V	0.005 W	3.5 V	0.40 T
7/07/1997	0.0168 V	0.0131 V	0.0267 V	0.0013 V	0.0015 D	0.0007 V	0.0087 V*	0.26 V	0.023 V	0.004 T	3.7 V	0.60 V
7/12/1998	0.0118 V	0.0074 V	0.0150 V	0.0008 D	0.0015 D	0.0007 D	0.0060 T	0.26 V	0.010 V	0.005 W	3.7 V	0.20 W
7/13/1999	0.0336 V	0.0210 V	0.0153 V	0.0008 D	0.0015 D	0.0007 D	0.0100 V	0.32 V	0.022 V	0.015 T	4.1 V	0.60 T
7/17/2000	0.0124 V	0.0112 V	0.0114 V	0.0009 V	0.0015 D	0.0007 D	0.0040 T	0.28 V	0.006 T	0.005 W	4.8 V	0.80 T
7/02/2001	0.0206 V	0.0125 V	0.0234 V	0.0017 V	0.0015 D	0.0021 V	0.0080 T	0.38 V	0.028 V	0.005 W	4.5 V	0.80 T
7/09/2002	0.0185 V	0.0111 V	0.0419 V	0.0012 V	0.0015 D	0.0014 V	0.0068 V*	0.26 V	N	0.008 T	5.4 V	0.60 V
7/22/2003	0.0190 V	0.0110 V	0.0250 V	0.0009 V	0.0015 D	0.0075 V	0.0091 V*	0.40 V	0.050 V	0.002 W	4.7 V	0.78 V
7/12/2004	0.0149 V	0.0055 V	0.0263 V	0.0009 V	0.0015 D	0.0012 V	0.0098 V*	0.25 V	0.012 V	0.002 W	4.3 V	0.62 V
7/28/2005	0.0111 V	0.0110 V	0.0122 V	0.0013 V	0.0015 D	0.0007 D	0.0076 V*	0.27 V	0.012 V	0.002 W	4.2 V	0.72 V

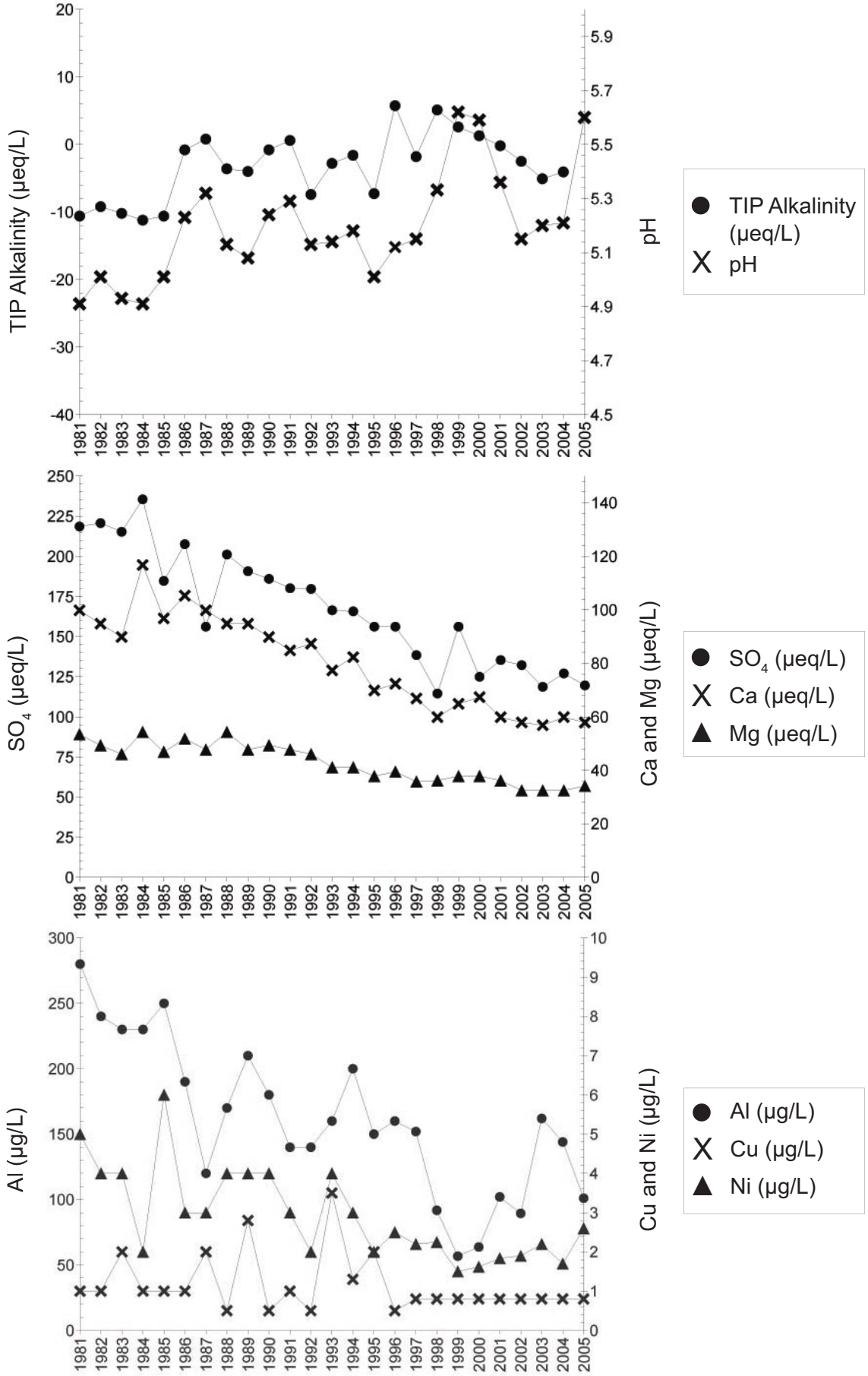
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Jim Edwards Lake



SES ID #	97	**Shoreline length (km)**	7.21
Township	Selby	**Maximum depth (m)**	23.5
Latitude	47°17’	**Mean depth (m)**	8.7
Longitude	80°25’	**Volume (x 10^4 m^3)**	722
Distance from Sudbury (km)	103	**Area (ha)**	88.84
Elevation (m)	351	**Road access**	No
Watershed code	2JD03		

Jim Edwards Lake



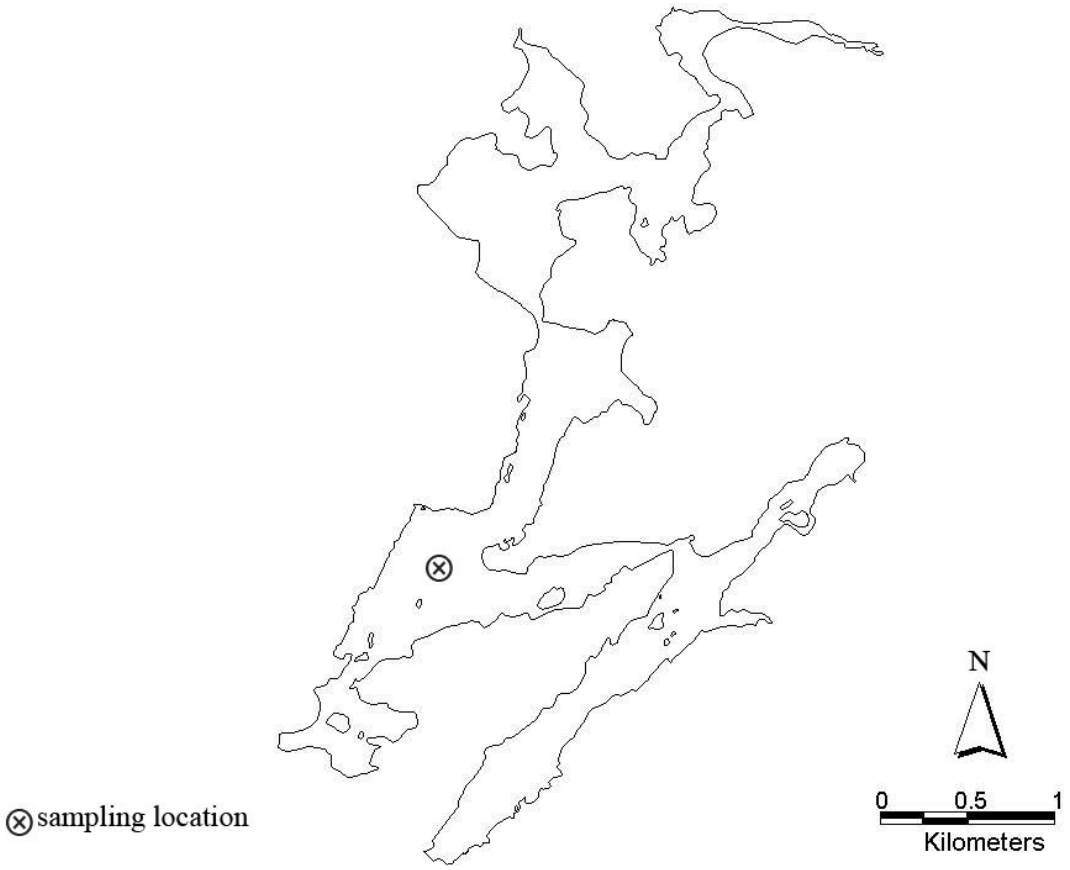
JIM EDWARDS SES # 97

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/29/1981	8.10 V	4.91 V	32.0 V	-0.53 V	2.00 V	0.650 V	0.600 V	0.300 V	0.30 V	10.5 V	N	4.5 V	1.350 V
7/08/1982	7.50 V	5.01 V	32.0 V	-0.46 V	1.90 V	0.600 V	N	N	N	10.6 V	N	5.6 V	N
8/04/1983	8.00 V	4.93 V	31.8 V	-0.51 V	1.80 V	0.560 V	0.750 V	0.420 V	0.39 V	10.3 V	N	8.7 V	1.670 V
7/24/1984	3.00 V	4.91 V	31.5 V	-0.56 V	2.34 V	0.660 V	0.650 V	0.340 V	0.18 V	11.3 V	6.0 V	N	1.100 V
7/30/1985	8.00 V	5.01 V	31.0 V	-0.53 V	1.94 V	0.570 V	0.590 V	0.350 V	0.05 T	8.9 V	5.0 V	N	1.560 V
7/15/1986	8.00 V	5.23 V	28.0 V	-0.04 V	2.11 V	0.630 V	0.630 V	0.340 V	0.60 V	10.0 V	2.0 V	N	1.660 V
7/15/1987	10.00 V	5.32 V	28.5 V	0.04 V	2.00 V	0.580 V	0.740 V	0.340 V	0.25 V	7.5 V	1.5 T	N	1.540 V
7/21/1988	8.40 V	5.13 V	29.2 V	-0.18 V	1.90 V	0.660 V	0.660 V	0.350 V	0.70 T	9.7 V	3.0 V	N	1.440 V
7/19/1989	8.50 V	5.08 V	28.6 V	-0.20 V	1.90 V	0.580 V	0.660 V	0.330 V	0.20 W	9.2 V	4.5 V	N	1.820 V
7/19/1990	9.00 V	5.24 V	34.5 V	-0.04 V	1.80 V	0.600 V	0.680 V	0.320 V	0.20 T	8.9 V	4.0 V	N	1.660 V
7/08/1991	9.00 V	5.29 V	26.0 V	0.03 C	1.70 V	0.580 V	0.600 V	0.310 V	0.20 W	8.7 V	2.0 V	N	1.640 V
7/06/1992	8.00 V	5.13 V	26.2 V	-0.37 C	1.75 V	0.560 V	0.650 V	0.320 V	0.20 T	8.6 V	2.0 V	N	1.560 V
7/07/1993	7.50 V	5.14 V	25.8 V	-0.14 V	1.55 V	0.500 V	0.620 V	0.285 V	0.20 W	8.0 V	3.8 V	N	1.640 V
7/04/1994	6.00 V	5.18 V	24.8 V	-0.08 V	1.65 V	0.500 V	0.620 V	0.287 V	0.20 W	8.0 V	3.2 V	N	1.600 V
7/12/1995	N	5.01 V	24.0 V	-0.36 C	1.40 V	0.460 V	0.560 V	0.260 V	0.20 W	7.5 V	3.2 V	N	1.520 V
7/08/1996	N	5.12 V	23.0 V	0.29 C	1.45 V	0.480 V	0.640 V	0.270 V	0.40 T	7.5 V	3.8 V	N	1.500 V
7/07/1997	N	5.15 V	21.5 V	-0.09 V	1.34 V	0.435 V	0.555 V	0.230 V	0.14 V	6.7 V	8.0 V	N	1.520 V
7/12/1998	N	5.33 V	20.8 V	0.26 V	1.20 V	0.440 V	0.640 V	0.270 V	0.20 W	5.5 V	N	N	1.420 V
7/13/1999	N	5.62 V	20.8 V	0.13 V	1.30 V	0.460 V	0.660 V	0.270 V	0.20 W	7.5 V	N	N	1.300 V
7/17/2000	N	5.59 V	20.7 V	0.06 V	1.35 V	0.460 V	0.660 V	0.260 V	0.20 W	6.0 V	N	N	1.360 V
7/02/2001	N	5.36 V	21.8 V	-0.01 V	1.20 V	0.440 V	0.660 V	0.260 V	0.20 W	6.5 V	N	N	1.320 V
7/09/2002	N	5.15 V	20.9 V	-0.12 V	1.16 V	0.395 V	0.600 V	0.225 V	0.19 V	6.4 V	N	N	1.280 V
7/24/2003	5.00 V	5.20 V	26.6 V	-0.25 V	1.14 V	0.395 V	0.610 V	0.215 V	0.16 V	5.7 V	N	N	1.300 V
7/12/2004	6.90 V	5.21 V	17.6 V	-0.20 V	1.20 V	0.395 V	0.600 V	0.200 V	0.20 V	6.1 V	N	N	O
7/0s7/2005	6.75 V	5.60 V	17.4 V	N	1.16 V	0.415 V	0.605 V	0.215 V	0.17 V	5.8 V	N	N	1.320 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/29/1981	0.0100 V	0.1840 V	0.2800 V	0.0010 W	0.0050 V	0.0100 V	0.0030 V	0.10 V	0.004 V	0.006 C	1.1 V	0.20 V
7/08/1982	0.0750 V	0.1850 V	0.2400 V	0.0010 L	0.0040 V	0.0080 V	N	N	N	N	N	N
8/04/1983	0.0250 V	0.1490 V	0.2300 V	0.0020 V	0.0040 V	O	N	N	N	N	N	N
7/24/1984	0.0450 V	0.1400 V	0.2300 V	0.0010 L	0.0020 V	0.0060 V	N	N	N	N	N	N
7/30/1985	0.0180 V	0.1600 V	0.2500 V	0.0010 L	0.0060 V	0.0080 V	N	N	N	N	N	N
7/15/1986	0.0610 V	0.2100 V	0.1900 V	0.0010 V	0.0030 V	0.0100 V	N	N	N	N	N	N
7/15/1987	0.0470 V	0.1600 V	0.1200 V	0.0020 V	0.0030 V	0.0090 V	N	N	N	N	N	N
7/21/1988	0.0210 T	0.1200 V	0.1700 V	0.0005 W	0.0040 T	0.0055 V	N	N	N	N	1.7 V	N
7/19/1989	0.0580 T	0.1300 V	0.2100 V	0.0028 V	0.0040 T	0.0077 V	N	N	N	N	1.7 V	N
7/19/1990	0.0500 T	0.1500 V	0.1800 V	0.0005 W	0.0040 T	0.0060 V	N	N	N	N	1.4 V	0.20 T
7/08/1991	0.0400 T	0.1500 V	0.1400 V	0.0010 T	0.0030 T	0.0060 V	0.0030 T	0.14 V	0.006 T	0.005 T	1.4 V	0.20 W
7/06/1992	O	0.1000 V	0.1400 V	0.0005 W	0.0020 W	0.0050 V	0.0040 T	0.10 V	0.010 V	0.005 T	1.3 V	0.20 W
7/07/1993	0.0440 T	0.1100 V	0.1600 V	0.0035 V	0.0040 T	0.0041 V	0.0020 W	0.12 V	0.010 V	0.010 T	1.5 V	0.20 W
7/04/1994	0.0520 T	0.1500 V	0.2000 V	0.0013 T	0.0030 T	0.0063 V	0.0020 T	0.12 V	0.010 V	0.005 T	1.9 V	0.20 T
7/12/1995	0.0400 T	0.1000 V	0.1500 V	0.0020 V	0.0020 T	0.0045 V	0.0060 T	0.12 V	0.006 T	0.005 W	1.8 V	0.20 W
7/08/1996	0.0400 T	0.1100 V	0.1600 V	0.0005 W	0.0025 T	0.0040 V	0.0020 W	0.14 V	0.008 T	0.005 W	1.7 V	0.20 W
7/07/1997	0.0585 V	0.1010 V	0.1520 V	0.0008 D	0.0022 V	0.0040 V	0.0071 V*	0.14 V	0.017 V	0.004 T	2.2 V	0.34 V
7/12/1998	0.0216 V	0.0857 V	0.0918 V	0.0008 D	0.0023 V	0.0035 V	0.0040 T	0.14 V	0.002 W	0.005 W	2.4 V	0.40 T
7/13/1999	0.0112 V	0.0615 V	0.0567 V	0.0008 D	0.0015 D	0.0029 V	0.0040 T	0.12 V	0.002 W	0.015 T	2.4 V	0.20 W
7/17/2000	0.0138 V	0.0505 V	0.0637 V	0.0008 D	0.0016 V	0.0030 V	0.0040 T	0.12 V	0.004 T	0.005 W	2.8 V	0.20 W
7/02/2001	0.0298 V	0.0566 V	0.1020 V	0.0008 D	0.0018 V	0.0034 V	0.0040 T	0.14 V	0.014 V	0.007 T	2.4 V	O
7/09/2002	0.0068 V	0.0532 V	0.0894 V	0.0008 D	0.0019 V	0.0035 V	0.0029 V*	0.15 V	N	0.012 V	2.1 V	0.22 V
7/24/2003	0.0371 V	0.0482 V	0.1620 V	0.0008 D	0.0022 V	0.0037 V	0.0041 V*	0.19 V	0.024 V	0.002 W	3.0 V	0.42 V
7/12/2004	0.0232 V	0.0439 V	0.1440 V	0.0008 D	0.0017 V	0.0038 V	0.0022 V*	0.11 V	0.012 V	0.008 T	2.3 V	0.22 V
7/07/2005	0.0250 V	0.0411 V	0.1010 V	0.0008 D	0.0026 V	0.0033 V	0.0015 V*	0.20 V	0.004 T	0.006 T	1.8 V	0.20 V

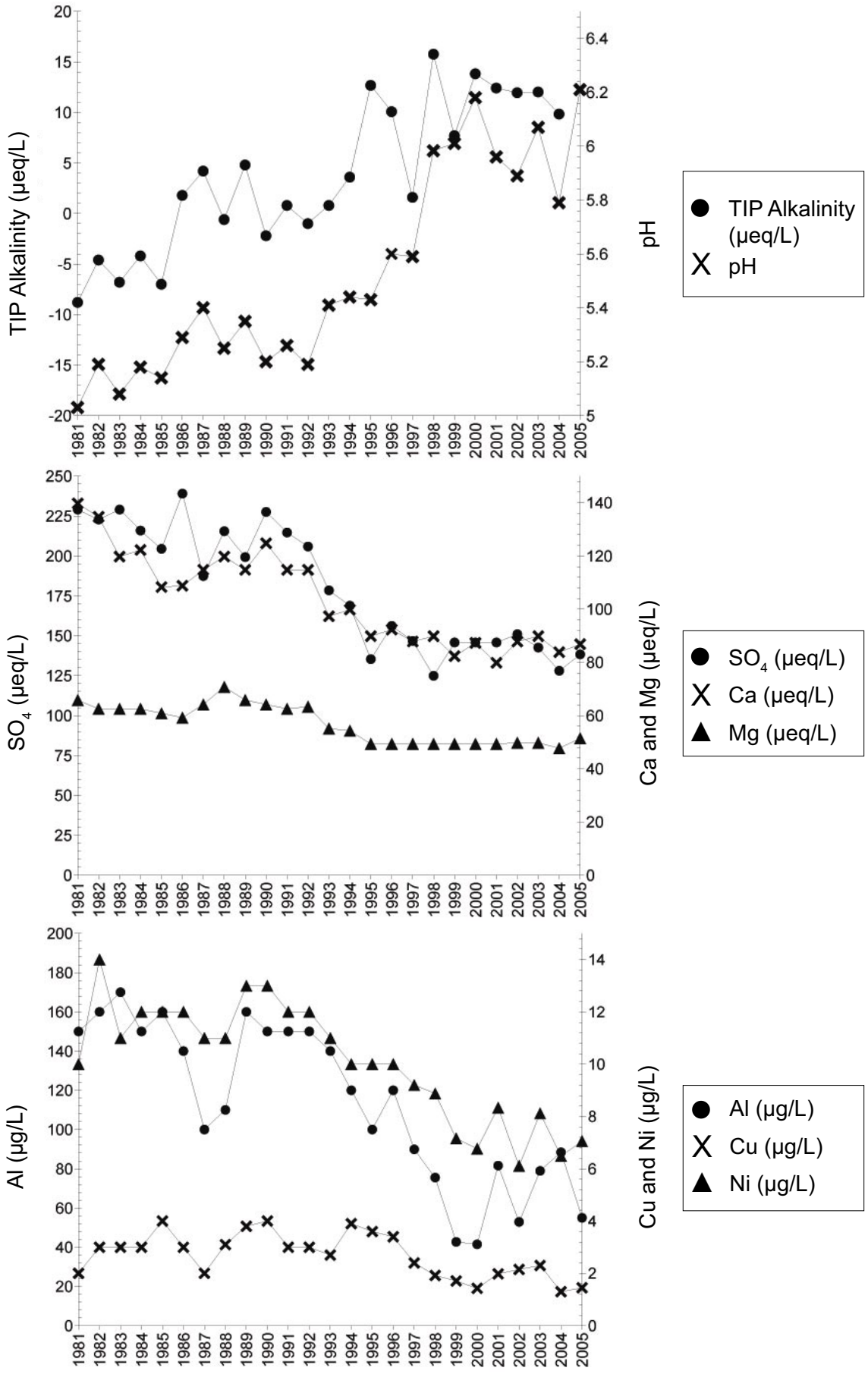
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Johnnie Lake



SES ID #	215	**Shoreline length (km)**	33.86
Township	Carlyle/Goschen	**Maximum depth (m)**	33.6
Latitude	46°05’	**Mean depth (m)**	7.9
Longitude	81°14’	**Volume (x 10^4 m^3)**	3129
Distance from Sudbury (km)	46	**Area (ha)**	342.28
Elevation (m)	206	**Road access**	Yes
Watershed code	2CF03		

Johnnie Lake



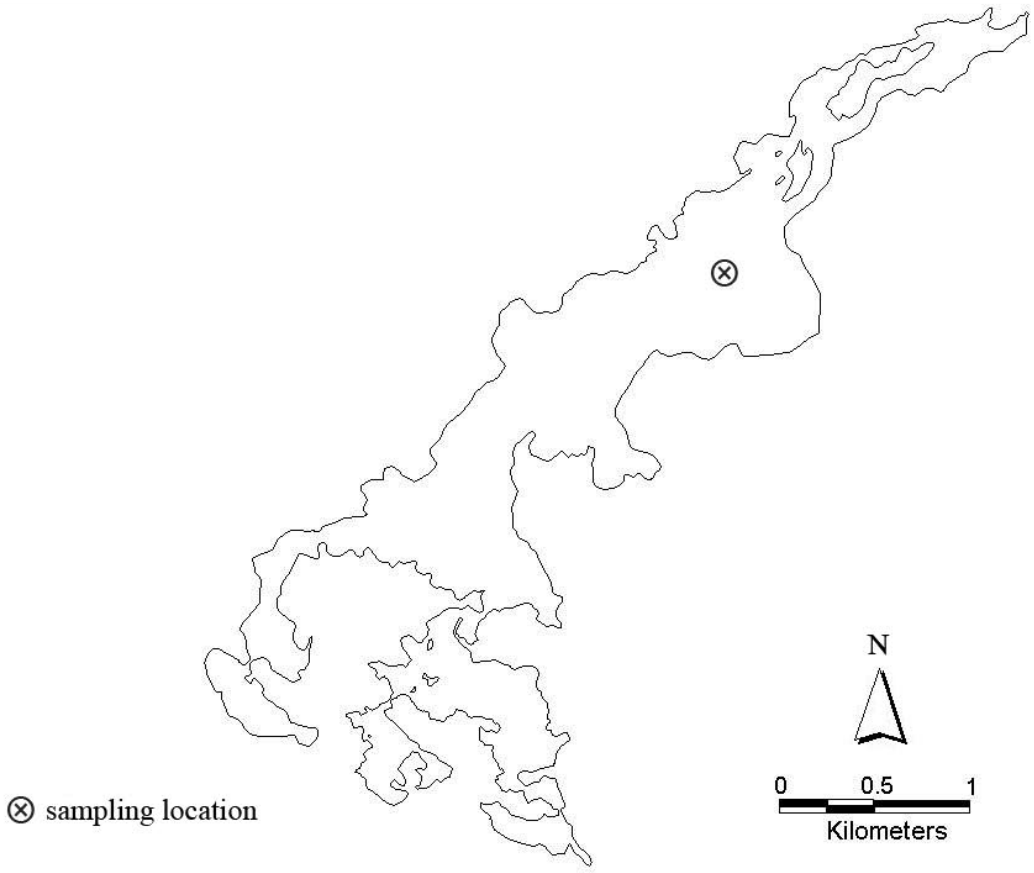
JOHNNIE SES # 215

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	7.40 V	5.03 V	36.0 V	-0.44 V	2.80 V	0.800 V	0.700 V	0.400 V	0.50 V	11.0 V	N	5.8 V	0.950 V
7/27/1982	6.00 V	5.19 V	35.0 V	-0.23 V	2.70 V	0.760 V	N	N	N	10.7 V	N	5.0 V	N
8/01/1983	5.00 V	5.08 V	34.4 V	-0.34 V	2.40 V	0.760 V	0.700 V	0.380 V	0.33 V	11.0 V	N	6.7 V	1.050 V
8/01/1984	4.90 V	5.18 V	36.5 V	-0.21 V	2.45 V	0.760 V	0.730 V	0.370 V	0.45 V	10.4 V	5.5 V	N	1.220 V
7/30/1985	4.00 V	5.14 V	34.0 V	-0.35 V	2.17 V	0.740 V	0.720 V	0.370 V	0.22 V	9.8 V	8.0 V	N	1.120 V
7/08/1986	5.00 V	5.29 V	31.0 V	0.09 V	2.18 V	0.720 V	0.700 V	0.370 V	0.35 V	11.5 V	5.5 V	N	1.060 V
7/23/1987	5.50 V	5.40 V	30.5 V	0.21 V	2.30 V	0.780 V	0.740 V	0.370 V	0.40 V	9.0 V	4.0 V	N	0.780 V
6/27/1988	8.40 V	5.25 V	31.5 V	-0.03 V	2.40 V	0.860 V	0.740 V	0.400 V	O	10.4 V	4.5 V	N	0.840 V
7/05/1989	9.00 V	5.35 V	34.2 V	0.24 V	2.30 V	0.800 V	0.820 V	0.420 V	0.70 T	9.6 V	6.0 V	N	1.140 V
7/05/1990	7.00 V	5.20 V	35.7 V	-0.11 V	2.50 V	0.780 V	0.840 V	0.440 V	0.50 T	10.9 V	4.5 V	N	1.100 V
7/11/1991	4.50 V	5.26 V	33.2 V	0.04 C	2.30 V	0.760 V	0.740 V	0.380 V	0.30 T	10.3 V	6.0 V	N	1.080 V
7/07/1992	7.90 V	5.19 V	31.6 V	-0.05 C	2.30 V	0.770 V	0.770 V	0.350 V	0.40 T	9.9 V	7.0 V	N	1.100 V
7/21/1993	3.80 V	5.41 V	28.5 V	0.04 V	1.95 V	0.670 V	0.730 V	0.464 V	0.30 T	8.6 V	8.2 V	N	1.220 V
7/12/1994	4.90 V	5.44 V	26.2 V	0.18 V	2.00 V	0.660 V	0.730 V	0.354 V	0.40 T	8.1 V	7.0 V	N	1.040 V
7/04/1995	N	5.43 V	28.7 V	0.63 C	1.80 V	0.600 V	0.840 V	0.430 V	0.40 T	6.5 V	9.2 V	N	1.000 V
7/03/1996	N	5.60 V	26.0 V	0.50 C	1.85 V	0.600 V	0.760 V	0.420 V	O	7.5 V	7.8 V	N	1.000 V
7/15/1997	N	5.59 V	23.3 V	0.08 V	1.76 V	0.600 V	0.725 V	0.380 V	0.36 V	7.1 V	9.6 V	N	1.220 V
7/07/1998	N	5.98 V	23.3 V	0.79 V	1.80 V	0.600 V	0.660 V	0.350 V	0.40 T	6.0 V	N	N	1.040 V
7/05/1999	N	6.01 V	24.5 V	0.39 V	1.65 V	0.600 V	0.700 V	0.360 V	0.40 T	7.0 V	N	N	0.880 V
7/05/2000	N	6.18 V	25.1 V	0.69 V	1.75 V	0.600 V	0.700 V	0.340 V	0.40 T	7.0 V	N	N	0.820 V
7/03/2001	N	5.96 V	25.1 V	0.62 V	1.60 V	0.600 V	0.780 V	0.370 V	0.40 T	7.0 V	N	N	1.000 V
7/08/2002	N	5.89 V	23.8 V	0.60 V	1.76 V	0.605 V	0.760 V	0.305 V	0.36 V	7.3 V	N	N	0.920 V
7/14/2003	3.70 V	6.07 V	21.0 V	0.60 V	1.80 V	0.605 V	0.780 V	0.370 V	O	6.9 V	N	N	0.760 V
7/05/2004	4.90 V	5.79 V	21.8 V	0.49 V	1.68 V	0.580 V	0.715 V	0.375 V	0.40 V	6.2 V	N	N	1.040 V
7/12/2005	3.50 V	6.21 V	24.0 V	N	1.74 V	0.625 V	0.760 V	0.375 V	0.41 V	6.7 V	8.6 V	N	0.880 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (m/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0800 V	0.1040 V	0.1500 V	0.0020 V	0.0100 V	0.0130 V	0.0040 V	0.16 V	0.032 V	0.096 C	2.4 V	0.40 V
7/27/1982	0.0700 V	0.1120 V	0.1600 V	0.0030 V	0.0140 V	0.0150 V	N	N	N	N	N	N
8/01/1983	0.0600 V	0.1050 V	0.1700 V	0.0030 V	0.0110 V	0.0160 V	N	N	N	N	N	N
8/01/1984	0.1150 V	0.1040 V	0.1500 V	0.0030 V	0.0120 V	0.0150 V	N	N	N	N	N	N
7/30/1985	0.0380 V	0.1300 V	0.1600 V	0.0040 V	0.0120 V	0.0180 V	N	N	N	N	N	N
7/08/1986	0.0710 V	0.1100 V	0.1400 V	0.0030 V	0.0120 V	0.0160 V	N	N	N	N	N	N
7/23/1987	O	0.1000 V	0.1000 V	0.0020 V	0.0110 V	O	N	N	N	N	N	N
6/27/1988	0.0360 T	0.0920 V	0.1100 V	0.0031 V	0.0110 V	0.0120 V	N	N	N	N	2.4 V	N
7/05/1989	0.0540 T	0.1200 V	0.1600 V	0.0038 V	0.0130 V	0.0140 V	N	N	N	N	2.9 V	N
7/05/1990	0.0300 T	0.1100 V	0.1500 V	0.0040 V	0.0130 V	0.0120 V	0.0040 T	0.19 V	0.038 V	0.100 V	2.3 V	0.20 T
7/11/1991	0.0400 T	0.1100 V	0.1500 V	0.0030 V	0.0120 V	0.0140 V	0.0030 T	0.25 V	0.034 V	0.070 V	2.9 V	0.20 T
7/07/1992	0.0400 T	0.0960 V	0.1500 V	0.0030 V	0.0120 V	0.0120 V	0.0040 T	0.20 V	0.044 V	0.085 V	2.8 V	0.20 W
7/21/1993	0.0530 T	0.0860 V	0.1400 V	0.0027 V	0.0110 V	0.0100 V	0.0060 T	0.22 V	0.032 V	0.085 V	3.3 V	0.20 T
7/12/1994	0.0510 T	0.0870 V	0.1200 V	0.0039 V	0.0100 T	0.0100 V	0.0040 T	0.24 V	0.038 V	0.130 V	3.0 V	0.20 T
7/04/1995	0.0400 T	0.0860 V	0.1000 V	0.0036 V	0.0100 V	0.0100 V	0.0100 V	0.30 V	0.014 V	0.055 V	3.7 V	0.20 W
7/03/1996	0.0600 T	0.1100 V	0.1200 V	0.0034 V	0.0100 V	0.0140 V	0.0060 T	0.28 V	0.028 V	0.025 V	3.1 V	0.20 W
7/15/1997	0.0387 V	0.0867 V	0.0899 V	0.0024 V	0.0092 V	0.0096 V	0.0086 V*	0.32 V	0.050 V	0.082 V	3.3 V	0.34 V
7/07/1998	0.0425 V	0.0831 V	0.0755 V	0.0019 V	0.0089 V	0.0082 V	0.0040 T	0.22 V	0.008 T	0.010 T	3.5 V	0.40 T
7/05/1999	0.0253 V	0.0776 V	0.0427 V	0.0017 V	0.0072 V	0.0079 V	0.0020 W	0.20 V	0.002 W	0.045 V	2.9 V	0.20 W
7/05/2000	0.0270 V	0.0721 V	0.0415 V	0.0014 V	0.0068 V	0.0077 V	0.0040 T	0.22 V	0.016 V	0.044 V	3.1 V	0.40 T
7/03/2001	0.0410 V	0.0715 V	0.0816 V	0.0020 V	0.0083 V	0.0080 V	0.0040 T	0.26 V	0.020 V	0.058 V	4.2 V	0.60 T
7/08/2002	0.0184 V	0.0635 V	0.0529 V	0.0022 V	0.0061 V	0.0062 V	0.0056 V*	0.21 V	N	0.044 V	3.8 V	O
7/14/2003	0.0396 V	0.0636 V	0.0789 V	0.0023 V	0.0081 V	0.0074 V	0.0051 V*	0.26 V	0.036 V	0.010 V	4.2 V	0.28 V
7/05/2004	0.0379 V	0.0533 V	0.0884 V	0.0013 V	0.0065 V	0.0064 V	0.0050 V*	0.17 V	0.018 V	0.046 V	3.6 V	0.44 V
7/12/2005	0.0354 V	0.0532 V	0.0550 V	0.0015 V	0.0071 V	0.0063 V	0.0031 V*	0.26 V	0.002 W	0.022 V	3.6 V	0.20 V

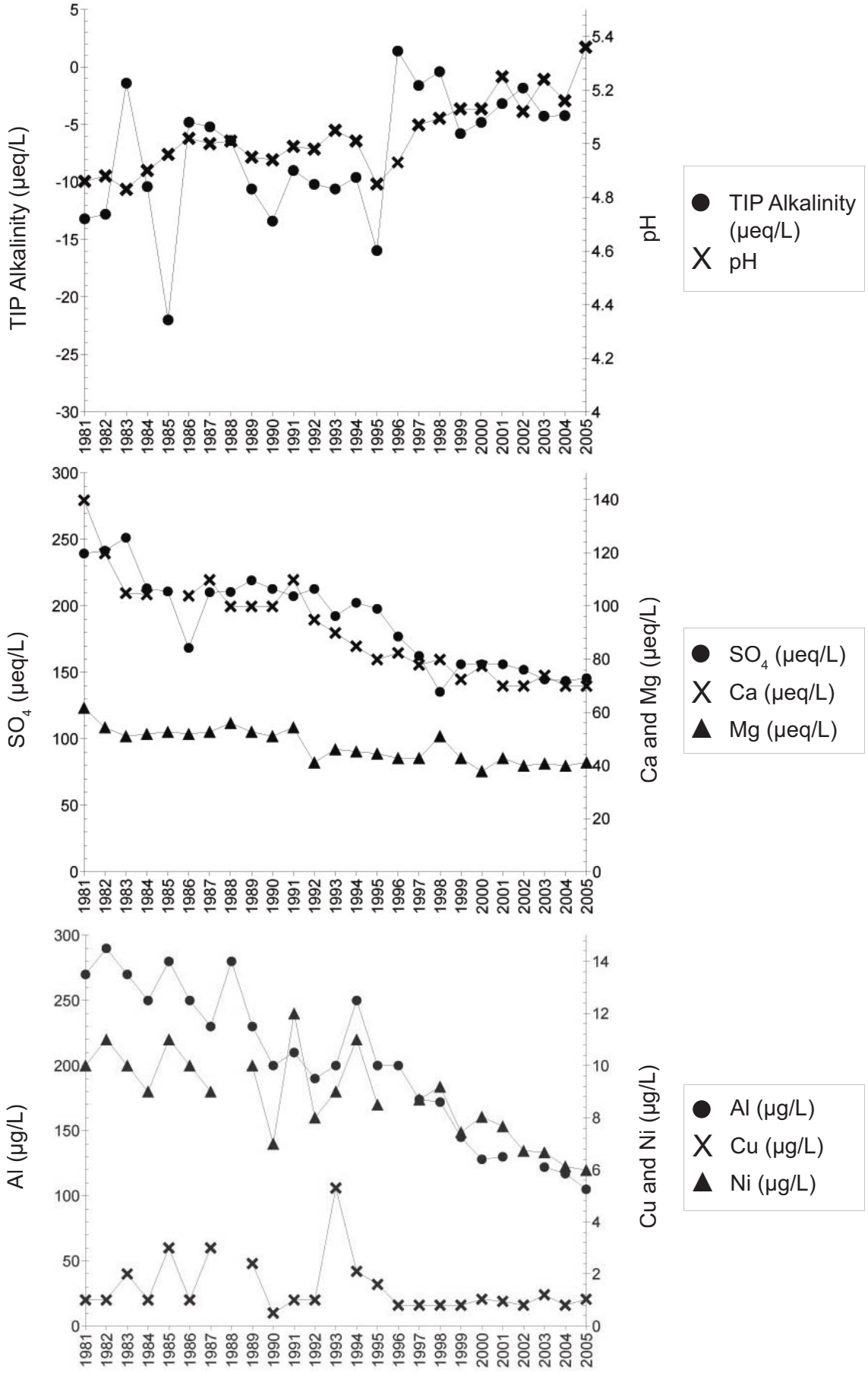
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Killarney Lake



SES ID #	224	**Shoreline length (km)**	22.88
Township	Killarney	**Maximum depth (m)**	61.0
Latitude	46°03’	**Mean depth (m)**	9.7
Longitude	81°21’	**Volume (x 10^4 m^3)**	3445
Distance from Sudbury (km)	51	**Area (ha)**	326.49
Elevation (m)	200	**Road access**	No
Watershed code	2CF03		

Killarney Lake



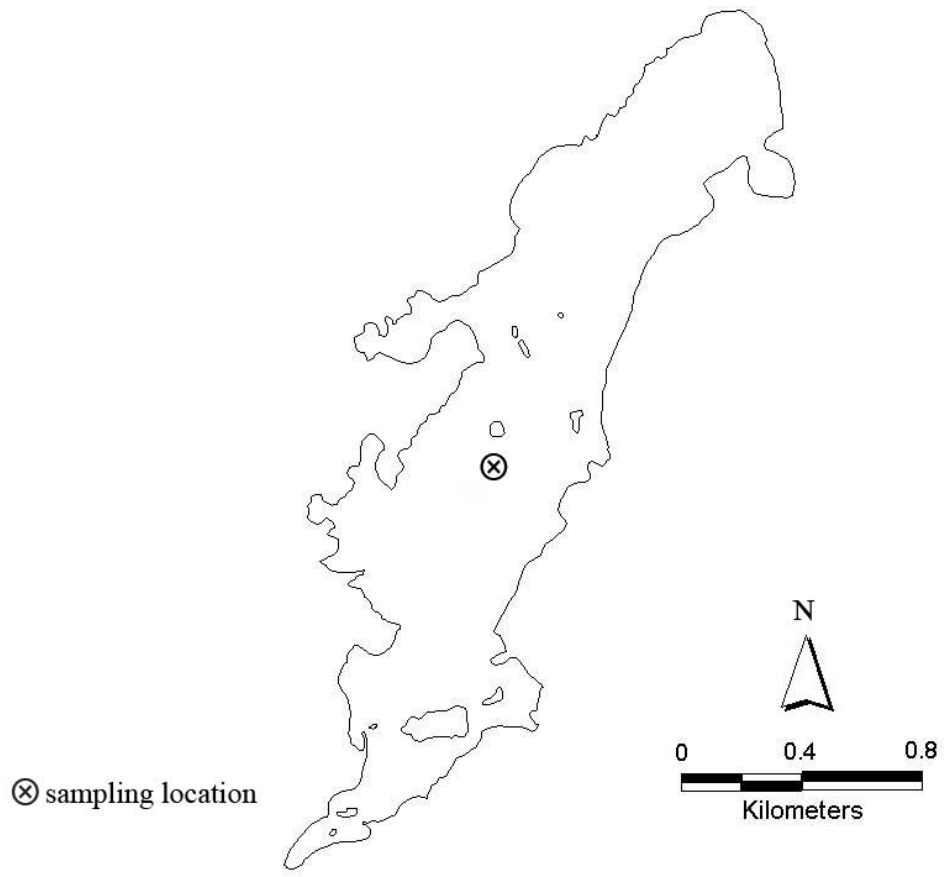
KILLARNEY SES # 224

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	17.30 V	4.86 V	36.0 V	-0.66 V	2.80 V	0.750 V	0.800 V	0.350 V	0.50 V	11.5 V	N	6.8 V	0.950 V
7/27/1982	18.50 V	4.88 V	36.0 V	-0.64 V	2.40 V	0.660 V	N	N	N	11.6 V	N	2.7 V	N
8/01/1983	12.00 V	4.83 V	36.0 V	-0.07 V	2.10 V	0.620 V	0.550 V	0.360 V	0.32 V	12.1 V	N	2.7 V	0.920 V
7/18/1984	12.00 V	4.90 V	35.4 V	-0.52 V	2.09 V	0.630 V	0.580 V	0.310 V	0.49 V	10.2 V	0.5 W	N	0.950 V
7/30/1985	17.50 V	4.96 V	34.0 V	-1.10 V	O	0.640 V	0.660 V	0.360 V	0.24 V	10.1 V	1.5 V	N	0.950 V
7/08/1986	18.00 V	5.02 V	33.0 V	-0.24 V	2.08 V	0.630 V	0.570 V	0.330 V	0.50 V	8.1 V	0.5 T	N	1.080 V
7/20/1987	20.00 V	5.00 V	33.0 V	-0.26 V	2.20 V	0.640 V	0.640 V	0.300 V	0.40 V	10.1 V	0.5 T	N	0.960 V
7/12/1988	19.00 V	5.01 V	32.7 V	-0.32 V	2.00 V	0.680 V	0.660 V	0.360 V	0.50 T	10.1 V	0.5 W	N	0.920 V
7/17/1989	19.00 V	4.95 V	32.3 V	-0.53 V	2.00 V	0.640 V	0.600 V	0.340 V	0.30 T	10.5 V	0.5 W	N	1.040 V
7/17/1990	14.00 V	4.94 V	32.0 V	-0.67 V	2.00 V	0.620 V	0.680 V	0.340 V	0.30 T	10.2 V	0.5 T	N	0.940 V
7/11/1991	16.00 V	4.99 V	31.2 V	-0.45 C	2.20 V	0.660 V	0.680 V	0.340 V	0.20 T	10.0 V	0.5 W	N	0.960 V
7/07/1992	20.00 V	4.98 V	30.5 V	-0.51 C	1.90 V	0.500 V	0.630 V	0.310 V	0.30 T	10.2 V	1.0 T	N	1.000 V
7/14/1993	18.50 V	5.05 V	29.6 V	-0.53 V	1.80 V	0.560 V	0.620 V	0.293 V	0.20 T	9.2 V	0.2 W	N	1.080 V
7/27/1994	25.00 V	5.01 V	28.9 V	-0.48 V	1.70 V	0.550 V	0.590 V	0.279 V	0.20 T	9.7 V	0.2 T	N	1.060 V
7/10/1995	N	4.85 V	27.0 V	-0.80 C	1.60 V	0.540 V	0.600 V	0.300 V	0.40 T	9.5 V	0.2 W	N	1.140 V
7/08/1996	N	4.93 V	26.0 V	0.07 C	1.65 V	0.520 V	0.600 V	0.290 V	0.40 T	8.5 V	0.4 T	N	1.180 V
7/15/1997	N	5.07 V	26.6 V	-0.08 V	1.56 V	0.520 V	0.550 V	0.245 V	0.31 V	7.8 V	1.2 V	N	1.200 V
7/07/1998	N	5.10 V	27.3 V	-0.02 V	1.60 V	0.620 V	0.560 V	0.280 V	0.40 T	6.5 V	N	N	1.220 V
7/06/1999	N	5.13 V	25.8 V	-0.29 V	1.45 V	0.520 V	0.600 V	0.290 V	0.40 T	7.5 V	N	N	1.160 V
7/05/2000	N	5.13 V	25.5 V	-0.24 V	1.55 V	0.460 V	0.580 V	0.280 V	0.40 T	7.5 V	N	N	1.120 V
7/05/2001	N	5.25 V	24.7 V	-0.16 V	1.40 V	0.520 V	0.640 V	0.290 V	0.40 T	7.5 V	N	N	1.200 V
7/09/2002	9.50 V	5.12 V	23.4 V	-0.09 V	1.40 V	0.485 V	0.630 V	0.285 V	0.36 V	7.3 V	N	N	0.980 V
7/16/2003	8.00 V	5.24 V	21.2 V	-0.21 V	1.48 V	0.495 V	0.720 V	0.335 V	0.34 V	7.0 V	N	N	0.960 V
7/06/2004	12.70 V	5.16 V	22.0 V	-0.21 V	1.40 V	0.485 V	0.595 V	0.290 V	0.37 V	6.9 V	N	N	1.160 V
7/04/2005	14.00 V	5.36 V	21.8 V	N	1.40 V	0.500 V	0.630 V	0.320 V	0.46 V	7.0 V	N	N	1.080 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0300 V	0.2080 V	0.2700 V	0.0010 V	0.0100 V	0.0220 V	0.0020 V	0.05 V	0.032 V	0.146 C	0.6 V	0.40 V
7/27/1982	0.0300 T	0.2170 V	0.2900 V	0.0010 L	0.0110 V	0.0230 V	N	N	N	N	N	N
8/01/1983	0.0350 V	0.1830 V	0.2700 V	0.0020 V	0.0100 V	0.0340 V	N	N	N	N	N	N
7/18/1984	0.0550 V	0.1820 V	0.2500 V	0.0010 V	0.0090 V	0.0200 V	N	N	N	N	N	N
7/30/1985	0.0350 V	0.1900 V	0.2800 V	0.0030 V	0.0110 V	0.0260 V	N	N	N	N	N	N
7/08/1986	0.0350 V	0.1800 V	0.2500 V	0.0010 V	0.0100 V	0.0210 V	N	N	N	N	N	N
7/20/1987	O	0.1800 V	0.2300 V	0.0030 V	0.0090 V	O	N	N	N	N	N	N
7/12/1988	0.0860 T	0.2100 V	0.2800 V	O	O	0.0280 V	N	N	N	N	0.2 T	N
7/17/1989	0.0300 T	0.1800 V	0.2300 V	0.0024 T	0.0100 T	0.0190 V	N	N	N	N	0.2 T	N
7/17/1990	0.0300 T	0.1500 V	0.2000 V	0.0005 W	0.0070 T	0.0160 V	N	N	N	N	0.1 T	0.20 T
7/11/1991	0.0300 T	0.1600 V	0.2100 V	0.0010 T	0.0120 V	0.0190 V	0.0030 T	0.15 V	0.020 V	0.115 V	0.4 T	0.20 W
7/07/1992	0.0260 T	0.1300 V	0.1900 V	0.0010 T	0.0080 T	0.0150 V	0.0020 T	0.09 T	0.036 V	0.120 V	0.9 V	0.20 W
7/14/1993	0.0220 T	0.1200 V	0.2000 V	0.0053 V	0.0090 T	0.0170 V	0.0020 T	0.08 T	0.024 V	0.110 V	0.8 V	0.20 T
7/27/1994	0.0310 T	0.1600 V	0.2500 V	0.0021 T	0.0110 V	0.0190 V	0.0020 T	0.08 T	0.038 V	0.045 V	0.3 T	0.20 W
7/10/1995	0.0200 W	0.1300 V	0.2000 V	0.0016 V	0.0085 V	0.0160 V	0.0020 W	0.08 T	0.014 V	0.080 V	0.5 V	0.20 T
7/08/1996	0.0200 W	0.1200 V	0.2000 V	0.0008 T	O	0.0160 V	0.0020 W	0.12 V	0.024 V	O	0.5 V	0.20 W
7/15/1997	0.0281 V	0.1240 V	0.1740 V	0.0008 D	0.0087 V	0.0164 V	0.0046 V*	0.10 V	0.042 V	0.126 V	0.5 V	0.18 V
7/07/1998	0.0320 V	0.1170 V	0.1720 V	0.0008 D	0.0092 V	0.0150 V	0.0020 W	0.10 V	0.024 V	0.115 V	0.7 V	0.20 W
7/06/1999	0.0251 V	0.1200 V	0.1450 V	0.0008 D	0.0074 V	0.0150 V	0.0020 W	0.12 V	0.026 V	0.125 V	0.3 T	0.40 T
7/05/2000	0.0147 V	0.1160 V	0.1280 V	0.0010 V	0.0080 V	0.0139 V	0.0020 W	0.06 T	0.020 V	0.128 V	0.2 T	0.40 T
7/05/2001	0.0274 V	0.1050 V	0.1300 V	0.0009 V	0.0077 V	0.0134 V	0.0040 T	0.08 T	0.018 V	0.117 V	0.7 V	0.40 T
7/09/2002	0.0164 V	0.0855 V	O	0.0008 D	0.0067 V	0.0117 V	0.0023 V*	0.14 V	N	0.104 V	0.4 T	0.10 V
7/16/2003	0.0279 V	0.0885 V	0.1220 V	0.0012 V	0.0067 V	0.0141 V	0.0021 V*	0.12 V	0.044 V	0.108 V	1.0 V	0.24 V
7/06/2004	0.0183 V	0.0616 V	0.1170 V	0.0008 D	0.0061 V	0.0100 V	0.0018 V*	0.03 V	0.014 V	0.106 V	0.8 V	0.34 V
7/04/2005	0.0221 V	0.0764 V	0.1050 V	0.0010 V	0.0060 V	0.0136 V	0.0025 V*	0.15 V	N	N	0.3 T	0.74 V

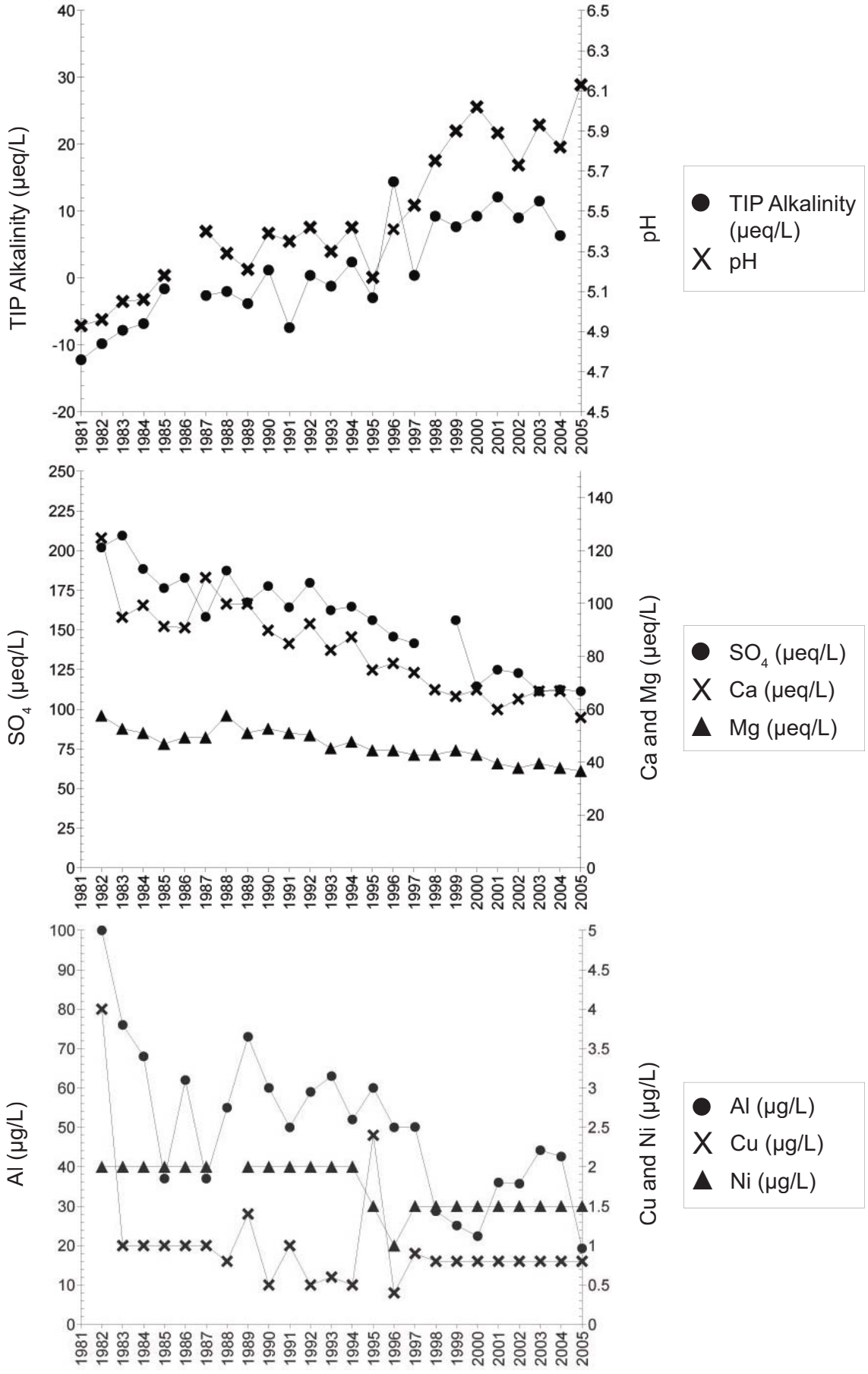
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Klock Lake



SES ID #	143	**Shoreline length (km)**	10.92
Township	Klock	**Maximum depth (m)**	14.0
Latitude	47°27’	**Mean depth (m)**	5.2
Longitude	80°07’	**Volume (x 10^4 m^3)**	632
Distance from Sudbury (km)	128	**Area (ha)**	147.68
Elevation (m)	345	**Road access**	No
Watershed code	2JD01		

Klock Lake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pH
TIP Alkalinity (µeq/L)
pH
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Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

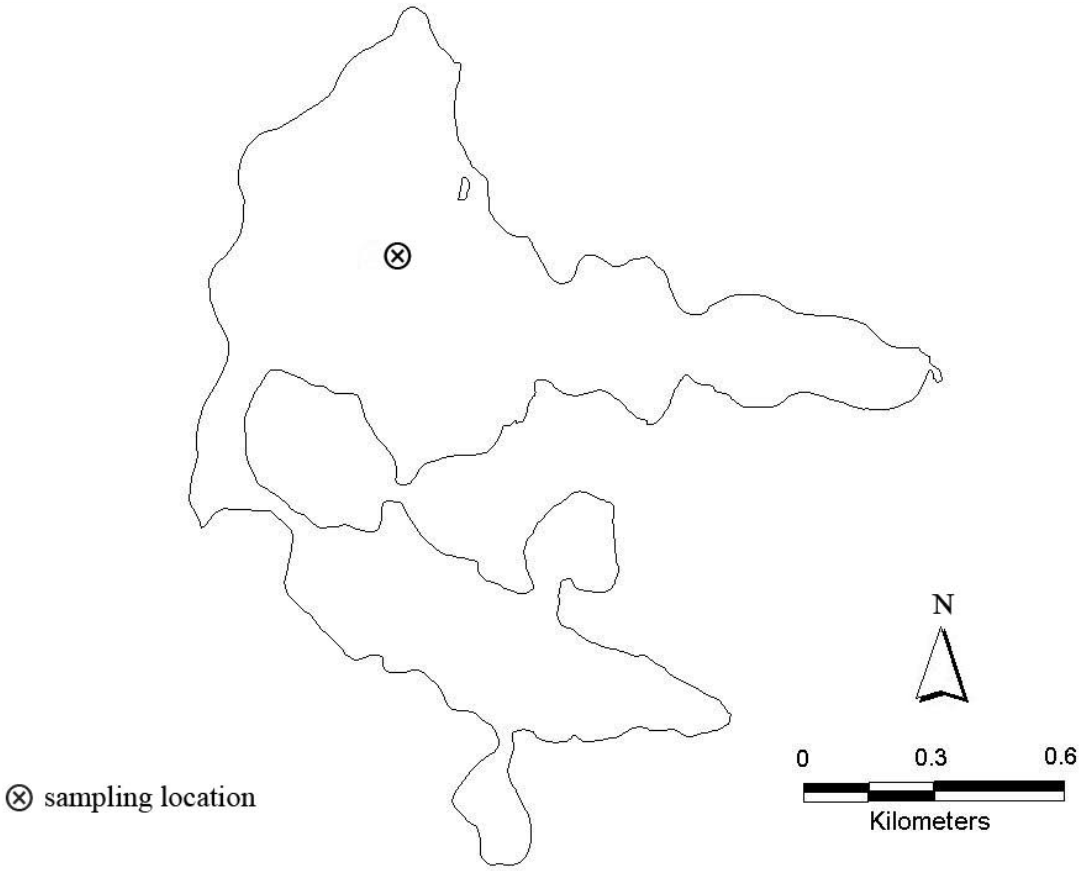
KLOCK SES # 143

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/08/1981	8.90 V	4.93 V	33.0 V	-0.61 V	N	N	N	N	N	N	N	N	N
6/29/1982	7.00 V	4.96 V	32.0 V	-0.49 V	2.50 V	0.700 V	N	N	N	9.7 V	N	-0.3 T	N
7/06/1983	9.00 V	5.05 V	31.1 V	-0.39 V	1.90 V	0.640 V	0.550 V	0.440 V	0.18 V	10.1 V	N	10.7 V	0.510 V
7/25/1984	7.00 V	5.06 V	30.0 V	-0.34 V	1.99 V	0.620 V	0.600 V	0.430 V	0.17 T	9.1 V	3.5 V	N	0.340 V
8/20/1985	4.00 V	5.18 V	29.0 V	-0.08 V	1.83 V	0.570 V	0.560 V	0.410 V	0.13 T	8.5 V	6.0 V	N	0.400 V
7/15/1986	7.00 V	O	O	O	1.82 V	0.600 V	0.640 V	0.420 V	0.40 V	8.8 V	2.0 V	N	0.360 V
7/14/1987	7.40 V	5.40 V	27.0 V	-0.13 V	2.20 V	0.600 V	0.700 V	0.410 V	0.30 V	7.6 V	1.0 T	N	0.320 V
7/13/1988	5.50 V	5.29 V	27.5 V	-0.10 V	2.00 V	0.700 V	0.680 V	0.430 V	0.40 T	9.0 V	3.0 V	N	0.440 V
7/19/1989	5.70 V	5.21 V	26.5 V	-0.19 V	2.00 V	0.620 V	0.640 V	0.410 V	0.20 W	8.0 V	5.0 V	N	0.700 V
7/19/1990	7.00 V	5.39 V	26.3 V	0.06 V	1.80 V	0.640 V	0.640 V	0.410 V	0.20 W	8.5 V	2.5 V	N	0.360 V
7/08/1991	7.10 V	5.35 V	25.3 V	-0.37 C	1.70 V	0.620 V	0.540 V	0.380 V	0.20 T	7.9 V	2.0 V	N	0.240 T
7/06/1992	6.00 V	5.42 V	25.2 V	0.02 C	1.85 V	0.610 V	0.620 V	0.380 V	0.20 T	8.6 V	2.0 V	N	0.280 V
7/07/1993	5.90 V	5.30 V	25.0 V	-0.06 V	1.65 V	0.550 V	0.610 V	0.386 V	0.20 W	7.8 V	5.2 V	N	0.380 V
7/04/1994	8.80 V	5.42 V	24.7 V	0.12 V	1.75 V	0.580 V	0.640 V	0.397 V	0.20 W	7.9 V	4.0 V	N	0.420 V
7/12/1995	N	5.17 V	24.0 V	-0.15 C	1.50 V	0.540 V	0.580 V	0.350 V	0.20 W	7.5 V	5.6 V	N	0.380 V
7/08/1996	N	5.41 V	23.0 V	0.72 C	1.55 V	0.540 V	0.640 V	0.360 V	0.40 T	7.0 V	5.6 V	N	0.420 V
7/07/1997	N	5.53 V	21.6 V	0.02 V	1.48 V	0.520 V	0.595 V	0.325 V	0.18 V	6.8 V	6.2 V	N	0.500 V
7/12/1998	N	5.75 V	21.0 V	0.46 V	1.35 V	0.520 V	0.660 V	0.380 V	0.20 W	O	N	N	0.220 V
7/13/1999	N	5.90 V	21.4 V	0.38 V	1.30 V	0.540 V	0.680 V	0.360 V	0.20 W	7.5 V	N	N	0.160 V
7/17/2000	N	6.02 V	20.3 V	0.46 V	1.35 V	0.520 V	0.680 V	0.370 V	0.20 W	5.5 V	N	N	0.080 T
7/02/2001	N	5.89 V	20.8 V	0.61 V	1.20 V	0.480 V	0.660 V	0.360 V	0.20 W	6.0 V	N	N	0.240 V
7/09/2002	N	5.73 V	19.6 V	0.45 V	1.28 V	0.460 V	0.630 V	0.315 V	0.27 V	5.9 V	N	N	0.460 V
7/22/2003	4.10 V	5.93 V	24.2 V	0.58 V	1.34 V	0.480 V	0.675 V	0.320 V	0.18 V	5.4 V	N	N	0.500 V
7/12/2004	5.10 V	5.82 V	16.8 V	0.32 V	1.34 V	0.460 V	0.655 V	0.330 V	0.19 V	5.4 V	N	N	0.580 V
7/28/2005	7.10 V	6.13 V	18.2 V	N	1.14 V	0.445 V	0.605 V	0.355 V	0.13 V	5.4 V	5.0 V	N	0.280 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
7/08/1981	N	N	N	N	N	N	N	N	N	N	N	N
6/29/1982	0.0450 V	0.0910 V	0.1000 V	0.0040 V	0.0020 V	0.0090 V	N	N	N	N	N	N
7/06/1983	0.0650 V	0.0720 V	0.0760 V	0.0010 V	0.0020 V	0.0070 V	N	N	N	N	N	N
7/25/1984	0.0400 T	0.0690 V	0.0680 V	0.0010 L	0.0020 V	0.0080 V	N	N	N	N	N	N
8/20/1985	0.0580 V	0.0640 V	0.0370 V	0.0010 W	0.0020 V	0.0060 V	N	N	N	N	N	N
7/15/1986	0.0200 V	0.0480 V	0.0620 V	0.0010 V	0.0020 L	0.0100 V	N	N	N	N	N	N
7/14/1987	0.0190 V	0.0450 V	0.0370 V	0.0010 W	0.0020 L	0.0070 V	0.0040 T	0.10 V	0.010 V	0.020 W	1.8 V	0.20 T
7/13/1988	0.0540 T	0.0530 V	0.0550 T	0.0008 T	O	0.0047 V	N	N	N	N	1.9 V	N
7/19/1989	0.0490 T	0.0500 V	0.0730 T	0.0014 T	0.0020 W	0.0057 V	N	N	N	N	1.9 V	N
7/19/1990	0.0300 T	0.0530 V	0.0600 T	0.0005 W	0.0020 W	0.0050 V	N	N	N	N	1.8 V	0.20 T
7/08/1991	0.0300 T	0.0450 V	0.0500 T	0.0010 T	0.0020 W	0.0040 V	0.0050 T	0.15 V	0.008 T	0.005 W	1.9 V	0.20 W
7/06/1992	0.1100 V	0.0390 V	0.0590 T	0.0005 W	0.0020 W	0.0040 V	0.0060 T	0.16 V	0.024 V	0.015 T	1.9 V	0.20 W
7/07/1993	0.0280 T	0.0370 V	0.0630 T	0.0006 T	0.0020 W	0.0036 V	0.0040 T	0.16 V	0.010 V	0.010 T	2.1 V	0.20 W
7/04/1994	0.0300 T	0.0370 V	0.0520 T	0.0005 W	0.0020 W	0.0037 V	0.0040 T	0.16 V	0.038 V	0.005 T	2.2 V	0.20 T
7/12/1995	0.0200 W	0.0340 V	0.0600 T	0.0024 V	0.0015 T	0.0035 V	0.0020 T	0.14 V	0.002 W	0.005 W	2.4 V	0.20 W
7/08/1996	0.0200 W	0.0310 V	0.0500 T	0.0004 T	0.0010 T	0.0020 T	0.0060 T	0.18 V	0.012 V	0.005 W	2.1 V	0.20 W
7/07/1997	0.0192 V	0.0259 V	0.0501 V	0.0009 V	0.0015 D	0.0020 V	0.0029 V*	0.18 V	0.021 V	0.004 T	2.3 V	0.26 V
7/12/1998	0.0136 V	0.0248 V	0.0287 V	0.0008 D	0.0015 D	0.0019 V	0.0020 W	0.20 V	0.004 T	0.005 W	2.2 V	0.20 W
7/13/1999	0.0219 V	0.0254 V	0.0251 V	0.0008 D	0.0015 D	0.0013 V	0.0040 T	0.20 V	0.008 T	0.015 T	2.8 V	0.20 W
7/17/2000	0.0206 V	0.0262 V	0.0224 V	0.0008 D	0.0015 D	0.0011 V	0.0080 T	0.22 V	0.002 W	0.005 W	3.3 V	0.20 W
7/02/2001	0.0259 V	0.0440 V	0.0360 V	0.0008 D	0.0015 D	0.0010 V	0.0080 T	0.20 V	0.006 T	0.005 W	3.0 V	O
7/09/2002	0.0043 V	0.0364 V	0.0357 V	0.0008 D	0.0015 D	0.0013 V	0.0071 V*	0.20 V	0.032 V	0.002 W	N	0.24 V
7/22/2003	0.0312 V	0.0326 V	0.0442 V	0.0008 D	0.0015 D	0.0014 V	0.0066 V*	0.22 V	0.040 V	0.002 W	3.8 V	0.40 V
7/12/2004	0.0300 V	0.0207 V	0.0426 V	0.0008 D	0.0015 D	0.0016 V	0.0053 V*	0.17 V	0.010 V	0.004 T	3.5 V	0.34 V
7/28/2005	0.0184 V	0.0224 V	0.0193 V	0.0008 D	0.0015 D	0.0007 D	0.0060 V*	0.18 V	0.012 V	0.002 W	2.9 V	0.34 V

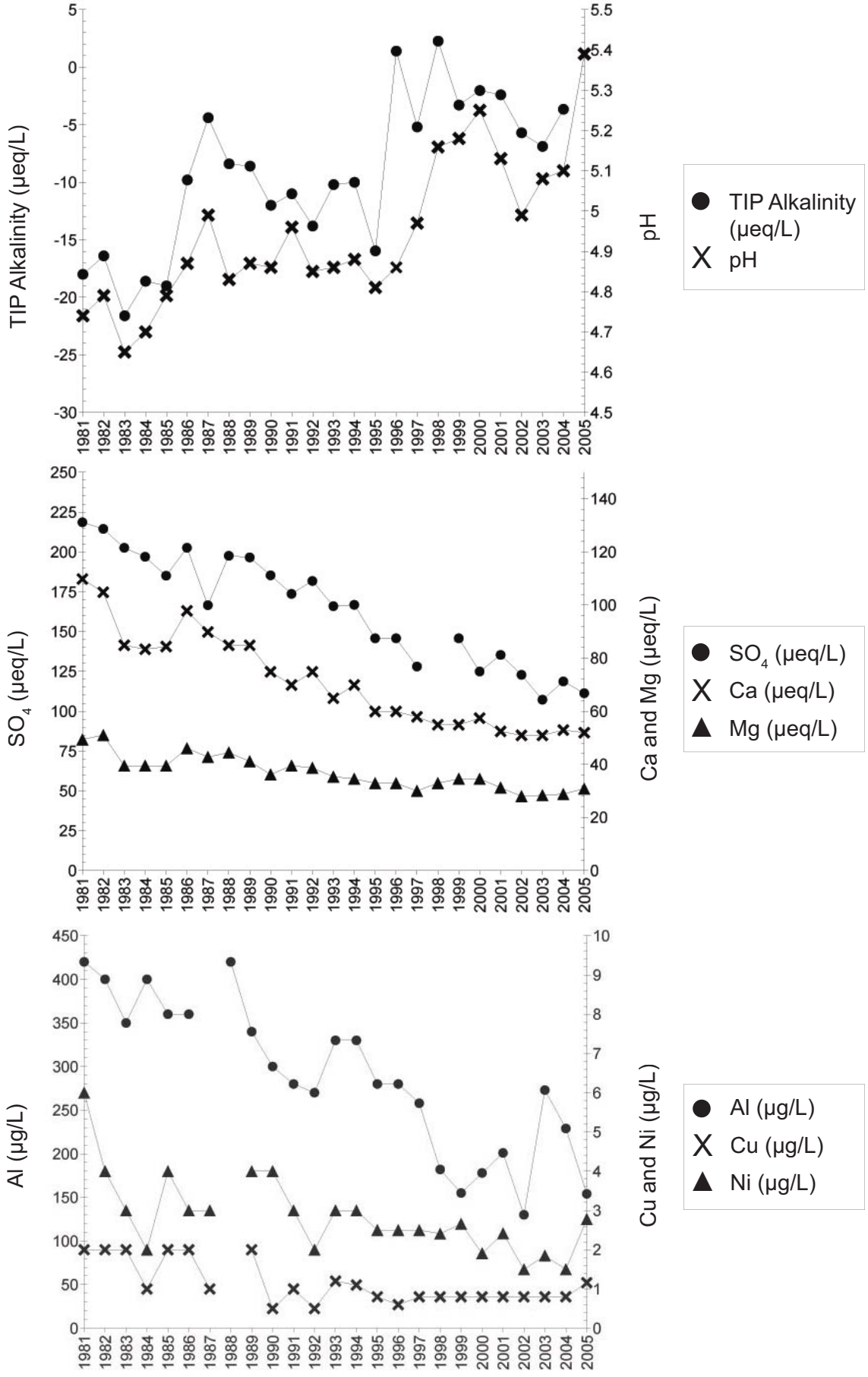
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Landers Lake



SES ID #	179	**Shoreline length (km)**	10.10
Township	Selby	**Maximum depth (m)**	24.0
Latitude	47°16’	**Mean depth (m)**	4.9
Longitude	80°29’	**Volume (x 10^4 m^3)**	541
Distance from Sudbury (km)	98	**Area (ha)**	107.12
Elevation (m)	422	**Road access**	No
Watershed code	2JD03		

Landers Lake



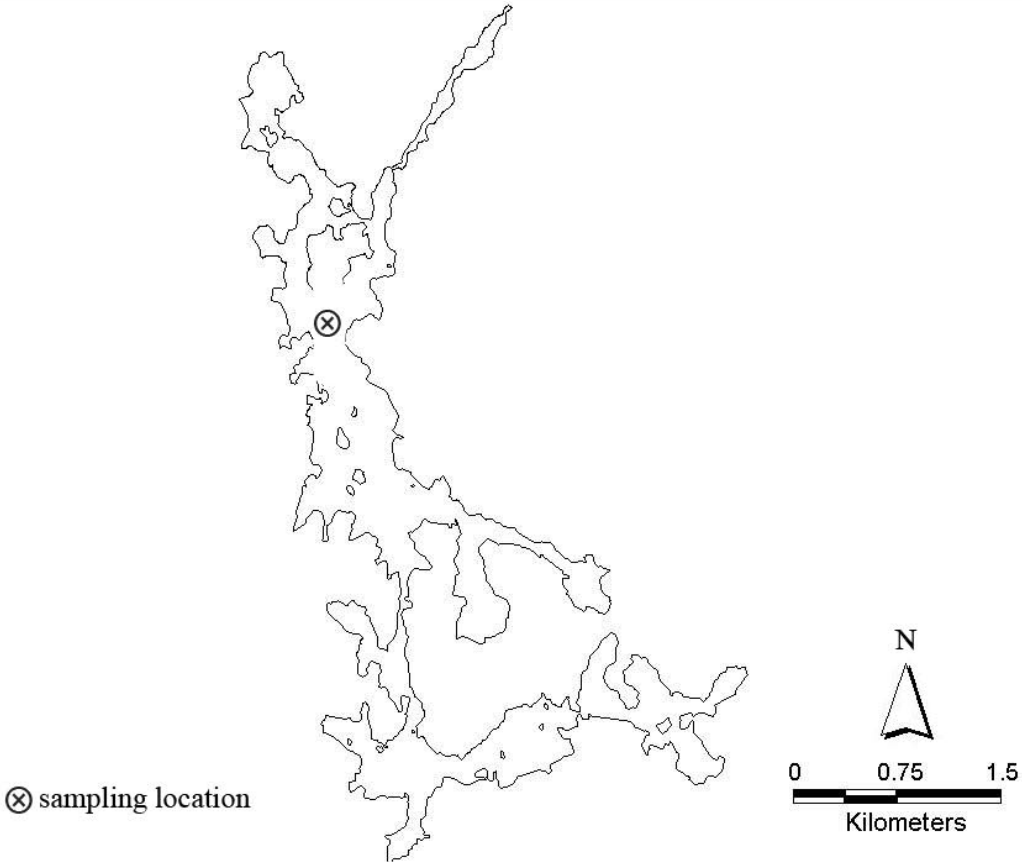
LANDERS SES # 179

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/11/1981	6.50 V	4.74 V	36.0 V	-0.90 V	2.20 V	0.600 V	0.800 V	0.300 V	0.40 V	10.5 V	N	32.8 V	0.800 V
7/08/1982	6.00 V	4.79 V	34.0 V	-0.82 V	2.10 V	0.620 V	N	N	N	10.3 V	N	7.5 V	N
8/04/1983	7.00 V	4.65 V	30.1 V	-1.08 V	1.70 V	0.480 V	0.750 V	0.380 V	0.25 V	9.7 V	N	5.0 V	1.050 V
7/24/1984	5.00 V	4.70 V	33.0 V	-0.93 V	1.67 V	0.480 V	0.600 V	0.240 V	0.07 T	9.5 V	8.0 V	N	1.310 V
7/30/1985	7.50 V	4.79 V	31.0 V	-0.95 V	1.69 V	0.480 V	0.640 V	0.310 V	0.05 T	8.9 V	5.0 V	N	0.940 V
7/15/1986	8.00 V	4.87 V	30.0 V	-0.49 V	1.96 V	0.560 V	0.620 V	0.290 V	0.50 V	9.7 V	4.5 V	N	1.220 V
7/15/1987	7.50 V	4.99 V	29.5 V	-0.22 V	1.80 V	0.520 V	0.740 V	0.290 V	0.20 T	8.0 V	1.5 T	N	1.080 V
7/21/1988	7.10 V	4.83 V	31.0 V	-0.42 V	1.70 V	0.540 V	0.680 V	0.330 V	0.70 T	9.5 V	7.5 V	N	1.260 V
7/19/1989	7.20 V	4.87 V	29.7 V	-0.43 V	1.70 V	0.500 V	0.660 V	0.290 V	0.20 T	9.4 V	6.0 V	N	1.580 V
7/25/1990	6.50 V	4.86 V	29.2 V	-0.60 V	1.50 V	0.440 V	0.680 V	0.300 V	0.40 T	8.9 V	7.0 V	N	1.080 V
7/08/1991	8.00 V	4.96 V	27.4 V	-0.55 C	1.40 V	0.480 V	0.560 V	0.260 V	0.20 W	8.3 V	4.5 V	N	1.160 V
7/06/1992	7.00 V	4.85 V	27.4 V	-0.69 C	1.50 V	0.470 V	0.640 V	0.270 V	0.20 T	8.7 V	4.0 V	N	1.200 V
7/07/1993	4.40 V	4.86 V	27.3 V	-0.51 V	1.30 V	0.430 V	0.600 V	0.254 V	0.20 W	8.0 V	7.2 V	N	1.360 V
7/04/1994	5.50 V	4.88 V	25.6 V	-0.50 V	1.40 V	0.420 V	0.610 V	0.259 V	0.20 W	8.0 V	5.4 V	N	1.200 V
7/12/1995	N	4.81 V	23.0 V	-0.80 C	1.20 V	0.400 V	0.540 V	0.230 V	0.20 W	7.0 V	7.4 V	N	1.200 V
7/08/1996	N	4.86 V	22.0 V	0.07 C	1.20 V	0.400 V	0.600 V	0.230 V	0.20 W	7.0 V	5.8 V	N	1.240 V
7/21/1997	N	4.97 V	21.6 V	-0.26 V	1.16 V	0.365 V	0.525 V	0.200 V	0.10 V	6.2 V	11.2 V	N	1.400 V
7/12/1998	N	5.16 V	20.6 V	0.11 V	1.10 V	0.400 V	0.640 V	0.220 V	0.20 W	O	N	N	1.160 V
7/13/1999	N	5.18 V	21.4 V	-0.16 V	1.10 V	0.420 V	0.700 V	0.230 V	0.20 W	7.0 V	N	N	1.120 V
7/17/2000	N	5.25 V	20.8 V	-0.10 V	1.15 V	0.420 V	0.680 V	0.220 V	0.20 W	6.0 V	N	N	1.400 V
7/02/2001	N	5.13 V	20.6 V	-0.12 V	1.05 V	0.380 V	0.660 V	0.230 V	0.20 W	6.5 V	N	N	1.380 V
7/09/2002	N	4.99 V	20.5 V	-0.29 V	1.02 V	0.340 V	0.585 V	0.205 V	0.20 V	5.9 V	N	N	1.320 V
7/24/2003	4.00 V	5.08 V	26.0 V	-0.34 V	1.02 V	0.345 V	0.575 V	0.200 V	0.14 V	5.2 V	N	N	1.200 V
7/12/2004	5.40 V	5.10 V	16.4 V	-0.18 V	1.06 V	0.350 V	0.585 V	0.170 V	0.16 V	5.7 V	N	N	1.440 V
7/07/2005	6.00 V	5.39 V	16.2 V	N	1.04 V	0.375 V	0.590 V	0.175 V	0.15 V	5.4 V	N	N	1.200 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/11/1981	0.0200 V	0.1640 V	0.4200 V	0.0020 V	0.0060 V	0.0140 V	0.0080 V	0.13 V	0.008 V	0.016 C	1.6 V	0.60 V
7/08/1982	0.1250 V	0.1640 V	0.4000 V	0.0020 V	0.0040 V	0.0110 V	N	N	N	N	N	N
8/04/1983	O	0.1370 V	0.3500 V	0.0020 V	0.0030 V	0.0210 V	N	N	N	N	N	N
7/24/1984	0.0500 V	0.1310 V	0.4000 V	0.0010 L	0.0020 V	0.0100 V	N	N	N	N	N	N
7/30/1985	0.0360 V	0.1500 V	0.3600 V	0.0020 V	0.0040 V	0.0130 V	N	N	N	N	N	N
7/15/1986	0.0760 V	0.1500 V	0.3600 V	0.0020 V	0.0030 V	0.0130 V	N	N	N	N	N	N
7/15/1987	O	0.1500 V	O	0.0010 V	0.0030 V	0.0100 V	N	N	N	N	N	N
7/21/1988	0.1400 V	0.1700 V	0.4200 V	O	O	0.0170 V	N	N	N	N	2.8 V	N
7/19/1989	0.0770 T	0.1400 V	0.3400 V	0.0020 T	0.0040 T	0.0086 V	N	N	N	N	2.2 V	N
7/25/1990	0.0500 T	0.1300 V	0.3000 V	0.0005 W	0.0040 T	0.0100 V	N	N	N	N	2.9 V	0.20 T
7/08/1991	0.0500 T	0.1400 V	0.2800 V	0.0010 T	0.0030 T	0.0080 V	0.0040 T	0.15 V	0.010 V	0.005 T	2.4 V	0.20 W
7/06/1992	0.1300 V	0.1300 V	0.2700 V	0.0005 W	0.0020 W	0.0080 V	0.0040 T	0.14 V	0.014 V	0.005 T	2.3 V	0.20 W
7/07/1993	0.0620 T	0.1200 V	0.3300 V	0.0012 T	0.0030 T	0.0073 V	0.0020 T	0.20 V	0.012 V	0.005 T	2.9 V	0.20 W
7/04/1994	0.0450 T	0.1600 V	0.3300 V	0.0011 T	0.0030 T	0.0080 V	0.0060 T	0.16 V	0.014 V	0.005 T	2.9 V	0.20 W
7/12/1995	0.0400 T	0.1200 V	0.2800 V	0.0008 T	0.0025 T	0.0065 V	0.0020 W	0.14 V	0.006 T	0.005 T	3.1 V	0.20 W
7/08/1996	0.0600 T	0.1100 V	0.2800 V	0.0006 T	0.0025 T	0.0055 V	0.0040 T	0.20 V	0.010 V	0.005 W	2.6 V	0.20 W
7/21/1997	0.0417 V	0.1070 V	0.2580 V	0.0008 D	0.0025 V	0.0050 V	0.0034 V*	0.18 V	0.022 V	0.004 T	3.2 V	0.32 V
7/12/1998	0.0271 V	0.1050 V	0.1820 V	0.0008 D	0.0024 V	0.0050 V	0.0040 T	0.16 V	0.006 T	0.005 W	2.6 V	0.20 W
7/13/1999	0.0287 V	0.0919 V	0.1550 V	0.0008 D	0.0027 V	0.0047 V	0.0040 T	0.16 V	0.006 T	0.015 T	2.5 V	0.20 W
7/17/2000	0.0320 V	0.0866 V	0.1780 V	0.0008 D	0.0019 V	0.0048 V	0.0020 W	0.16 V	0.010 V	0.005 W	3.0 V	0.20 W
7/02/2001	0.0492 V	0.1080 V	0.2010 V	0.0008 D	0.0024 V	0.0046 V	0.0080 T	0.18 V	0.012 V	0.005 W	3.1 V	0.60 T
7/09/2002	0.0295 V	0.0806 V	0.1300 V	0.0008 D	0.0015 D	0.0038 V	0.0042 V*	0.21 V	0.028 V	0.004 T	N	0.22 V
7/24/2003	0.0678 V	0.0866 V	0.2730 V	0.0008 D	0.0019 V	0.0054 V	0.0046 V*	0.25 V	0.044 V	0.002 W	4.7 V	0.46 V
7/12/2004	0.0535 V	0.0708 V	0.2290 V	0.0008 D	0.0015 D	0.0044 V	0.0036 V*	0.15 V	0.024 V	0.006 T	3.4 V	0.40 V
7/07/2005	0.0485 V	0.0698 V	0.1540 V	0.0012 V	0.0028 V	0.0044 V	0.0026 V*	0.16 V	0.002 W	0.004 T	2.9 V	0.20 V

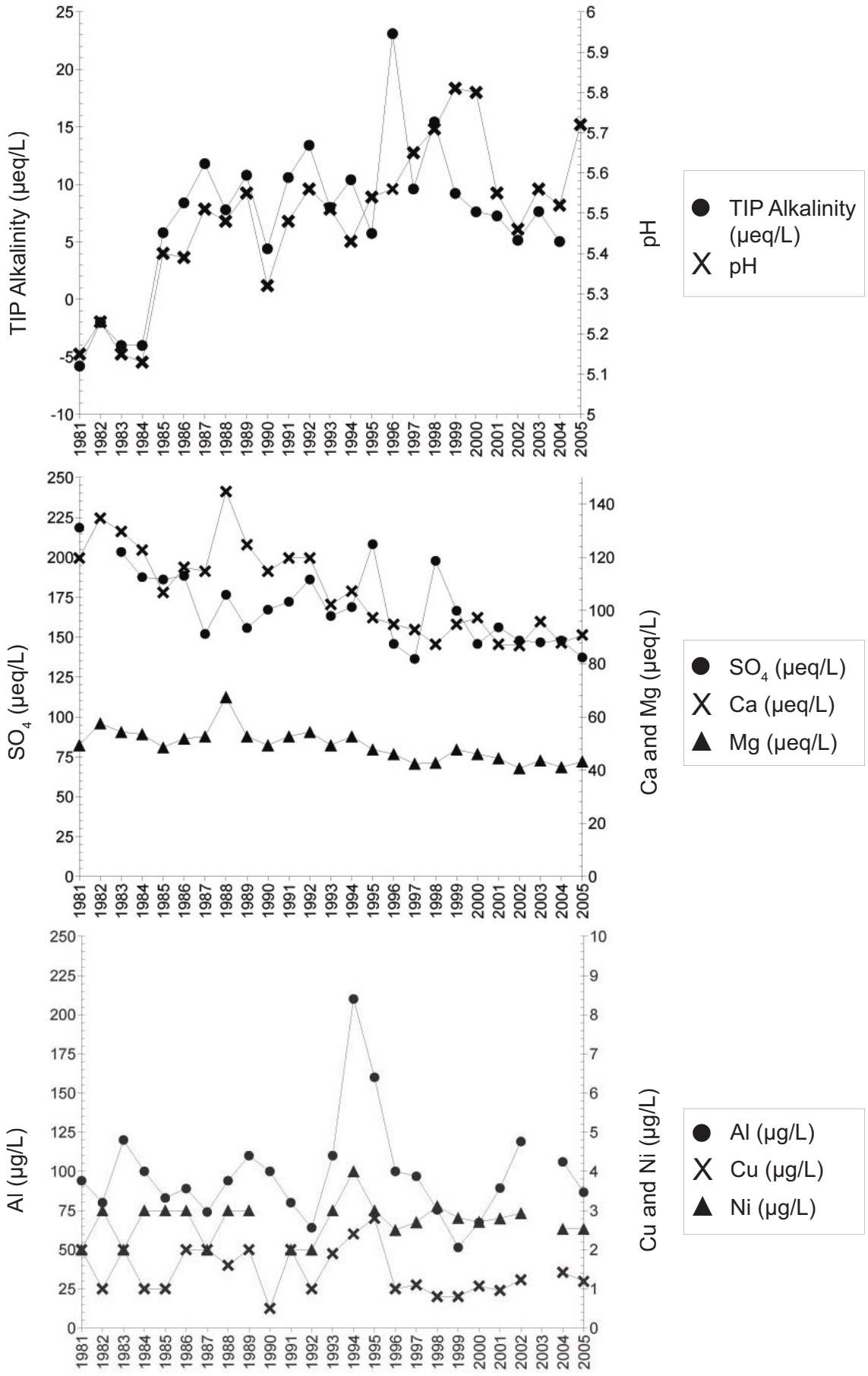
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Laundrie Lake

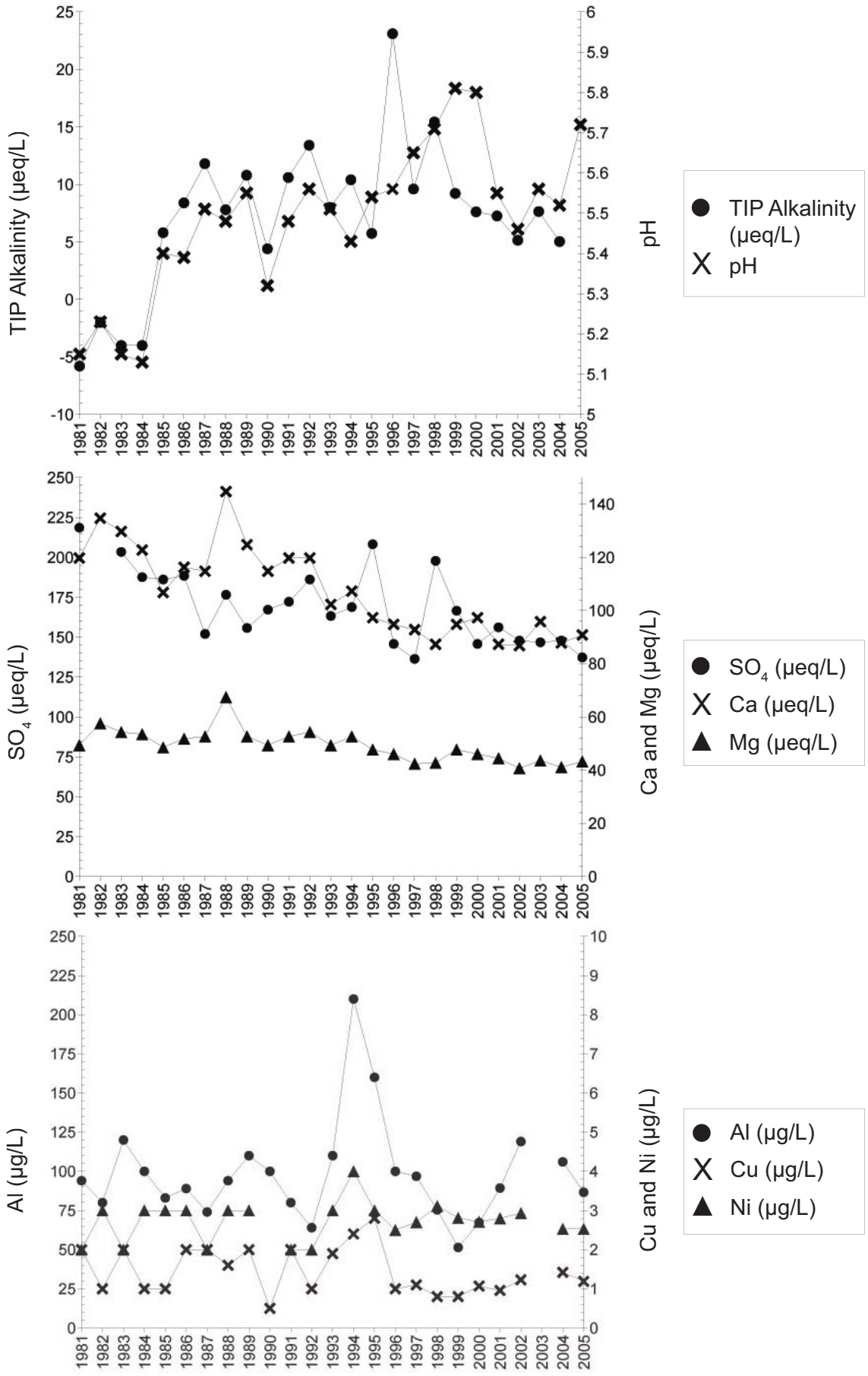


SES ID #	93	**Shoreline length (km)**	42.52
Township	Howey	**Maximum depth (m)**	20.4
Latitude	47°07’	**Mean depth (m)**	4.9
Longitude	80°51’	**Volume (x 10^4 m^3)**	1833
Distance from Sudbury (km)	72	**Area (ha)**	369.71
Elevation (m)	381	**Road access**	Yes
Watershed code	2DC01		

Laundrie Lake



Laundrie Lake



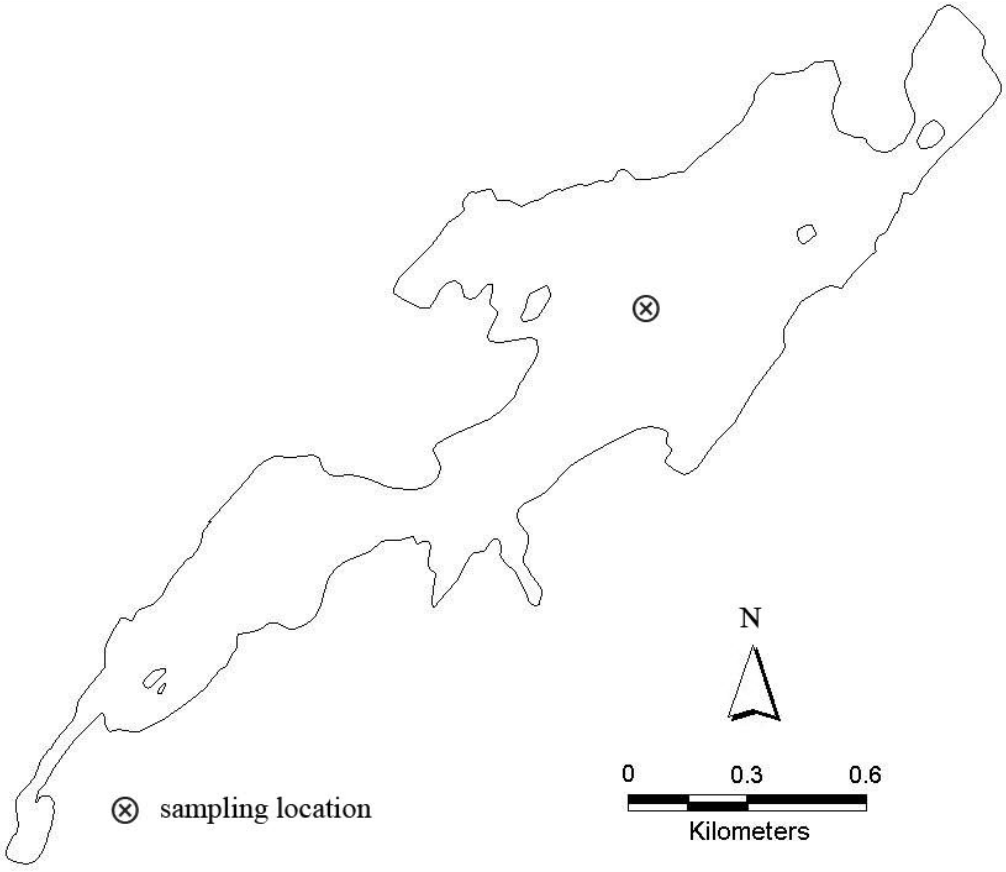
LAUNDRIE SES # 93

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	4.50 V	5.15 V	33.0 V	-0.29 V	2.40 V	0.600 V	0.800 V	0.400 V	0.40 V	10.5 V	N	15.7 V	0.950 V
7/22/1982	4.50 V	5.23 V	33.0 V	-0.10 V	2.70 V	0.700 V	N	N	N	N	N	15.9 V	N
7/25/1983	6.00 V	5.15 V	33.5 V	-0.20 V	2.60 V	0.660 V	0.650 V	0.360 V	0.25 V	9.8 V	N	12.6 V	0.950 V
7/25/1984	3.00 V	5.13 V	31.5 V	-0.20 V	2.46 V	0.650 V	0.640 V	0.280 V	0.14 T	9.0 V	25.0 V	N	0.940 V
8/05/1985	4.00 V	5.40 V	31.0 V	0.29 V	2.14 V	0.590 V	0.700 V	0.290 V	0.20 V	8.9 V	21.0 V	N	1.050 V
7/21/1986	4.50 V	5.39 V	29.0 V	0.42 V	2.33 V	0.630 V	0.670 V	0.290 V	0.45 V	9.1 V	16.0 V	N	1.100 V
7/15/1987	5.90 V	5.51 V	28.0 V	0.59 V	2.30 V	0.640 V	0.660 V	0.270 V	0.25 V	7.3 V	14.0 V	N	0.840 V
7/20/1988	3.90 V	5.48 V	28.0 V	0.39 V	2.90 V	0.820 V	O	0.330 V	0.80 T	8.5 V	14.5 V	N	0.540 V
7/31/1989	2.80 V	5.55 V	28.3 V	0.54 V	2.50 V	0.640 V	0.720 V	0.300 V	0.40 T	7.5 V	21.5 V	N	1.040 V
7/25/1990	4.30 V	5.32 V	27.0 V	0.22 V	2.30 V	0.600 V	0.760 V	0.290 V	0.30 T	8.0 V	22.5 V	N	1.000 V
7/09/1991	5.00 V	5.48 V	27.2 V	0.53 C	2.40 V	0.640 V	0.780 V	0.300 V	0.30 T	8.3 V	13.5 V	N	0.820 V
7/08/1992	4.50 V	5.56 V	27.4 V	0.67 C	2.40 V	0.660 V	0.700 V	0.300 V	0.40 T	8.9 V	13.0 V	N	0.760 V
7/06/1993	3.40 V	5.51 V	26.5 V	0.40 V	2.05 V	0.600 V	0.660 V	0.266 V	0.20 T	7.8 V	19.4 V	N	0.860 V
7/25/1994	3.00 V	5.43 V	26.2 V	0.52 V	2.15 V	0.640 V	0.720 V	0.320 V	0.30 T	8.1 V	42.8 V	N	0.860 V
7/10/1995	N	5.54 V	25.0 V	0.29 C	1.95 V	0.580 V	0.700 V	0.320 V	0.40 T	10.0 V	22.2 V	N	0.420 V
7/08/1996	N	5.56 V	24.0 V	1.16 C	1.90 V	0.560 V	0.700 V	0.320 V	0.40 T	7.0 V	21.8 V	N	0.900 V
7/15/1997	N	5.65 V	23.2 V	0.48 V	1.86 V	0.515 V	0.675 V	0.305 V	0.21 V	6.6 V	25.6 V	N	1.240 V
7/13/1998	N	5.71 V	23.4 V	0.77 V	1.75 V	0.520 V	0.700 V	0.320 V	0.20 W	9.5 V	N	N	0.980 V
7/13/1999	N	5.81 V	25.3 V	0.46 V	1.90 V	0.580 V	0.720 V	0.300 V	0.40 T	8.0 V	N	N	0.860 V
7/17/2000	N	5.80 V	24.6 V	0.38 V	1.95 V	0.560 V	0.720 V	0.290 V	0.40 T	7.0 V	N	N	0.940 V
7/02/2001	N	5.55 V	25.7 V	0.36 V	1.75 V	0.540 V	0.720 V	0.300 V	0.40 T	7.5 V	N	N	1.040 V
6/27/2002	3.50 V	5.46 V	24.7 V	0.26 V	1.74 V	0.495 V	0.695 V	0.315 V	0.35 V	7.1 V	N	N	1.440 V
7/09/2003	2.80 V	5.56 V	24.2 V	0.38 V	1.92 V	0.530 V	0.780 V	0.475 V	0.32 V	7.1 V	N	N	1.000 V
7/13/2004	2.90 V	5.52 V	21.6 V	0.25 V	1.76 V	0.500 V	0.700 V	0.395 V	0.30 V	7.1 V	N	N	1.260 V
7/07/2005	2.25 V	5.72 V	21.4 V	N	1.82 V	0.525 V	0.655 V	0.390 V	0.29 V	6.6 V	N	N	1.260 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0900 V	0.0540 V	0.0940 V	0.0020 V	0.0020 L	0.0030 V	0.0060 V	0.19 V	0.012 V	0.021 C	4.7 V	0.60 V
7/22/1982	N	N	0.0800 V	0.0010 L	0.0030 V	0.0040 V	N	N	N	N	N	N
7/25/1983	0.0450 V	0.0510 V	0.1200 V	0.0020 V	0.0020 V	O	N	N	N	N	N	N
7/25/1984	0.1200 V	0.0490 V	0.1000 V	0.0010 L	0.0030 V	0.0050 V	N	N	N	N	N	N
8/05/1985	0.0920 V	0.0370 V	0.0830 V	0.0010 V	0.0030 V	0.0050 V	N	N	N	N	N	N
7/21/1986	0.0920 V	0.0340 V	0.0890 V	0.0020 V	0.0030 V	0.0040 V	N	N	N	N	N	N
7/15/1987	O	0.0320 V	0.0740 V	0.0020 V	0.0020 V	0.0040 V	N	N	N	N	N	N
7/20/1988	0.0680 T	0.0430 V	0.0940 T	0.0016 T	0.0030 T	0.0049 V	N	N	N	N	3.6 V	N
7/31/1989	0.1300 V	0.0550 V	0.1100 V	0.0020 T	0.0030 T	0.0058 V	N	N	N	N	4.6 V	N
7/25/1990	0.1400 V	0.0510 V	0.1000 T	0.0005 W	O	0.0060 V	N	N	N	N	4.2 V	0.40 T
7/09/1991	0.0600 T	0.0340 V	0.0800 T	0.0020 T	0.0020 W	0.0060 V	0.0040 T	0.21 V	0.014 V	0.010 T	3.7 V	0.40 T
7/08/1992	0.0530 T	0.0320 V	0.0640 T	0.0010 T	0.0020 W	0.0030 V	0.0050 T	0.19 V	0.014 V	0.005 T	3.6 V	0.20 W
7/06/1993	0.0910 T	0.0420 V	0.1100 V	0.0019 T	0.0030 T	0.0033 V	0.0040 T	0.26 V	0.016 V	0.005 T	4.4 V	0.40 T
7/25/1994	O	0.1000 V	0.2100 V	0.0024 T	0.0040 T	0.0063 V	O	0.40 V	0.052 V	0.010 T	O	0.20 T
7/10/1995	0.0600 T	0.0680 V	0.1600 V	0.0028 V	0.0030 T	0.0030 V	0.0020 W	0.22 V	0.004 T	0.010 T	4.7 V	0.20 W
7/08/1996	0.0800 T	0.0820 V	0.1000 V	0.0010 V	0.0025 T	0.0025 V	0.0060 T	0.24 V	0.020 V	0.005 W	4.4 V	0.20 W
7/15/1997	0.1090 V	0.0829 V	0.0968 V	0.0011 V	0.0027 V	0.0035 V	0.0086 V*	0.30 V	0.026 V	0.006 T	4.4 V	0.18 V
7/13/1998	0.0502 V	0.0932 V	0.0754 V	0.0008 D	0.0031 V	0.0045 V	0.0060 T	0.22 V	0.006 T	0.005 W	4.2 V	0.20 W
7/13/1999	0.0538 V	0.0881 V	0.0514 V	0.0008 D	0.0028 V	0.0035 V	0.0080 T	0.20 V	0.004 T	0.015 T	3.9 V	0.20 W
7/17/2000	0.0473 V	0.0968 V	0.0673 V	0.0011 V	0.0027 V	0.0043 V	0.0060 T	0.20 V	0.004 T	0.005 W	4.1 V	0.20 W
7/02/2001	0.1050 V	0.1050 V	0.0893 V	0.0010 V	0.0028 V	0.0052 V	0.0080 T	0.24 V	0.008 T	0.006 T	4.7 V	0.60 T
6/27/2002	0.0984 V	0.0825 V	0.1190 V	0.0012 V	0.0029 V	0.0057 V	0.0122 V*	0.27 V	0.060 V	0.020 V	N	0.52 V
7/09/2003	N	N	N	N	N	N	0.0082 V*	0.20 V	0.040 V	0.010 V	4.8 V	0.34 V
7/13/2004	0.0936 V	0.0574 V	0.1060 V	0.0014 V	0.0025 V	0.0044 V	0.0073 V*	0.28 V	0.014 V	0.004 T	4.9 V	0.34 V
7/07/2005	0.0758 V	0.0595 V	0.0866 V	0.0012 V	0.0025 V	0.0051 V	0.0066 V*	0.28 V	0.008 T	0.004 T	4.9 V	0.36 V

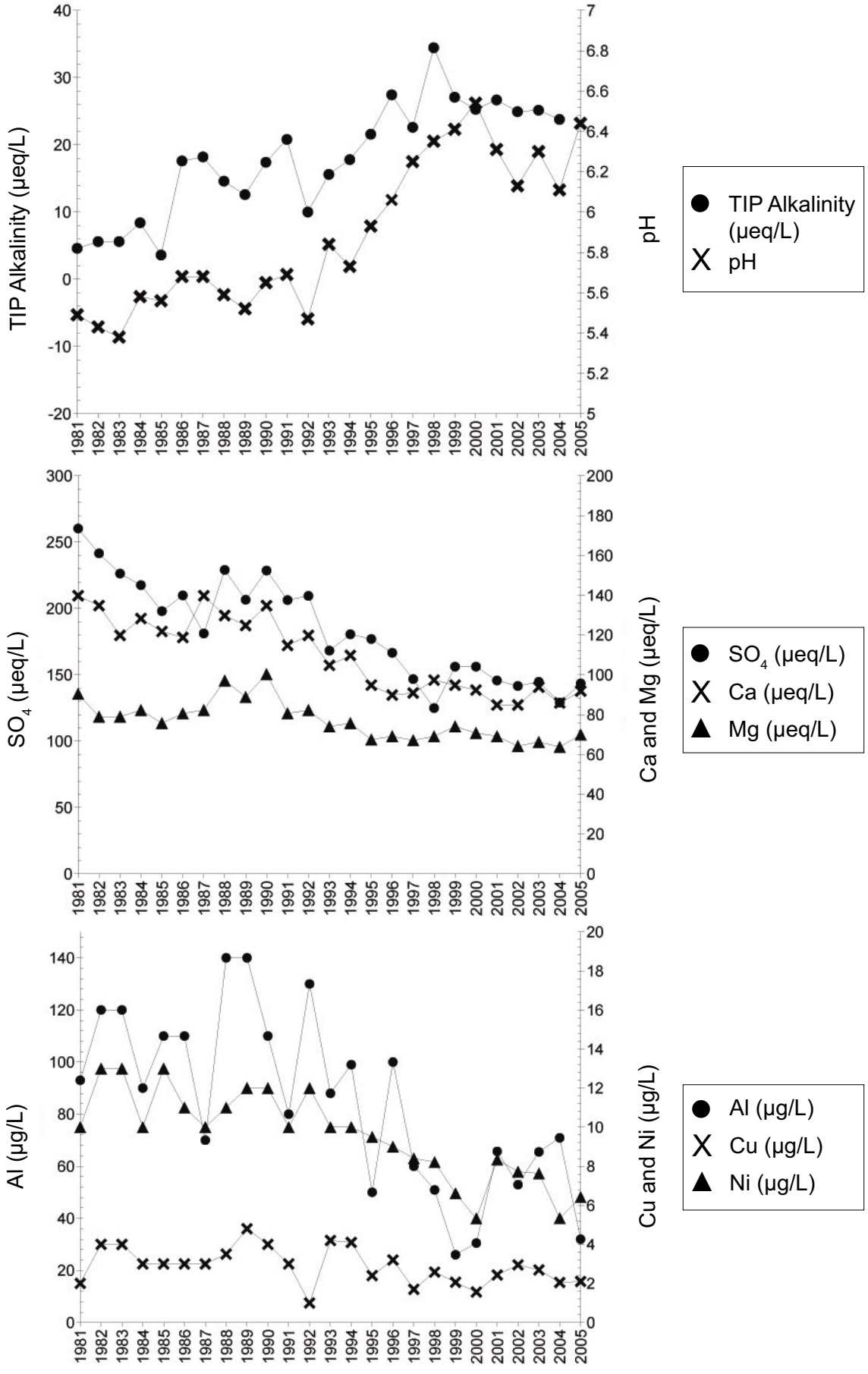
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Mahzenazing Lake



SES ID #	219	**Shoreline length (km)**	9.81
Township	Carlyle/Humboldt	**Maximum depth (m)**	16.6
Latitude	46°03’	**Mean depth (m)**	7.0
Longitude	81°10’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	51	**Area (ha)**	107.30
Elevation (m)	195	**Road access**	Yes
Watershed code	2CF03		

Mahzenazing Lake



MAHZENAZING SES # 219

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	4.10 V	5.49 V	39.0 V	0.23 V	2.80 V	1.100 V	1.100 V	0.500 V	1.30 V	12.5 V	N	15.3 V	1.300 V
7/27/1982	3.00 V	5.43 V	38.0 V	0.28 V	2.70 V	0.960 V	N	N	N	11.6 V	N	16.9 V	N
8/01/1983	3.00 V	5.38 V	37.5 V	0.28 V	2.40 V	0.960 V	1.050 V	0.520 V	0.60 V	10.9 V	N	14.1 V	1.370 V
7/30/1984	4.00 V	5.58 V	36.5 V	0.42 V	2.57 V	1.000 V	1.020 V	0.450 V	0.57 V	10.5 V	15.0 V	N	1.070 V
7/14/1985	4.50 V	5.56 V	35.5 V	0.18 V	2.44 V	0.920 V	0.890 V	0.480 V	0.55 V	9.5 V	16.0 V	N	1.590 V
7/08/1986	2.50 V	5.68 V	34.0 V	0.88 V	2.38 V	0.980 V	0.990 V	0.460 V	0.65 V	10.1 V	11.0 V	N	1.540 V
7/22/1987	5.20 V	5.68 V	35.0 V	0.91 V	2.80 V	1.000 V	1.100 V	0.490 V	0.70 V	8.7 V	12.0 V	N	1.560 V
6/28/1988	3.30 V	5.59 V	35.8 V	0.73 V	2.60 V	1.180 V	1.100 V	0.510 V	1.30 V	11.0 V	12.0 V	N	1.540 V
7/05/1989	3.80 V	5.52 V	36.6 V	0.63 V	2.50 V	1.080 V	1.100 V	0.490 V	0.80 T	9.9 V	12.0 V	N	1.540 V
7/04/1990	4.90 V	5.65 V	36.2 V	0.87 V	2.70 V	1.220 V	1.340 V	0.560 V	1.20 V	11.0 V	13.5 V	N	1.500 V
7/10/1991	4.00 V	5.69 V	33.9 V	1.04 C	2.30 V	0.980 V	1.020 V	0.460 V	1.00 V	9.9 V	14.5 V	N	1.340 V
7/06/1992	3.10 V	5.47 V	33.4 V	0.50 C	2.40 V	1.000 V	1.070 V	0.440 V	0.80 T	10.1 V	14.0 V	N	1.580 V
7/21/1993	3.20 V	5.84 V	31.1 V	0.78 V	2.10 V	0.900 V	1.050 V	0.412 V	0.60 T	8.1 V	17.8 V	N	1.240 V
7/11/1994	3.50 V	5.73 V	30.0 V	0.89 V	2.20 V	0.920 V	1.020 V	0.427 V	0.70 T	8.7 V	14.0 V	N	1.340 V
7/05/1995	N	5.93 V	29.9 V	1.08 C	1.90 V	0.820 V	1.040 V	0.410 V	0.80 T	8.5 V	16.4 V	N	0.900 V
7/03/1996	N	6.06 V	29.0 V	1.37 C	1.80 V	0.840 V	1.040 V	0.430 V	0.80 T	8.0 V	17.0 V	N	0.800 V
7/15/1997	N	6.25 V	26.9 V	1.13 V	1.82 V	0.815 V	1.050 V	0.380 V	0.63 V	7.1 V	17.6 V	N	1.060 V
7/07/1998	N	6.35 V	27.9 V	1.72 V	1.95 V	0.840 V	1.040 V	0.420 V	0.80 T	6.0 V	N	N	0.980 V
7/05/1999	N	6.41 V	30.3 V	1.35 V	1.90 V	0.900 V	1.240 V	0.420 V	1.00 V	7.5 V	N	N	0.640 V
7/05/2000	N	6.54 V	29.8 V	1.26 V	1.85 V	0.860 V	1.220 V	0.450 V	1.00 V	7.5 V	N	N	0.600 V
7/09/2001	N	6.31 V	29.1 V	1.33 V	1.70 V	0.840 V	1.220 V	0.410 V	1.00 V	7.0 V	N	N	0.620 V
7/08/2002	N	6.13 V	25.8 V	1.25 V	1.70 V	0.780 V	1.180 V	0.335 V	0.84 V	6.8 V	N	N	0.440 V
7/14/2003	2.80 V	6.30 V	24.6 V	1.26 V	1.88 V	0.805 V	1.290 V	0.405 V	O	7.0 V	N	N	0.580 V
7/05/2004	3.05 V	6.11 V	25.4 V	1.19 V	1.72 V	0.775 V	1.170 V	0.410 V	0.92 V	6.2 V	N	N	0.780 V
7/12/2005	3.50 V	6.44 V	28.8 V	N	1.84 V	0.850 V	1.280 V	0.410 V	1.02 V	6.9 V	13.4 V	N	0.780 V

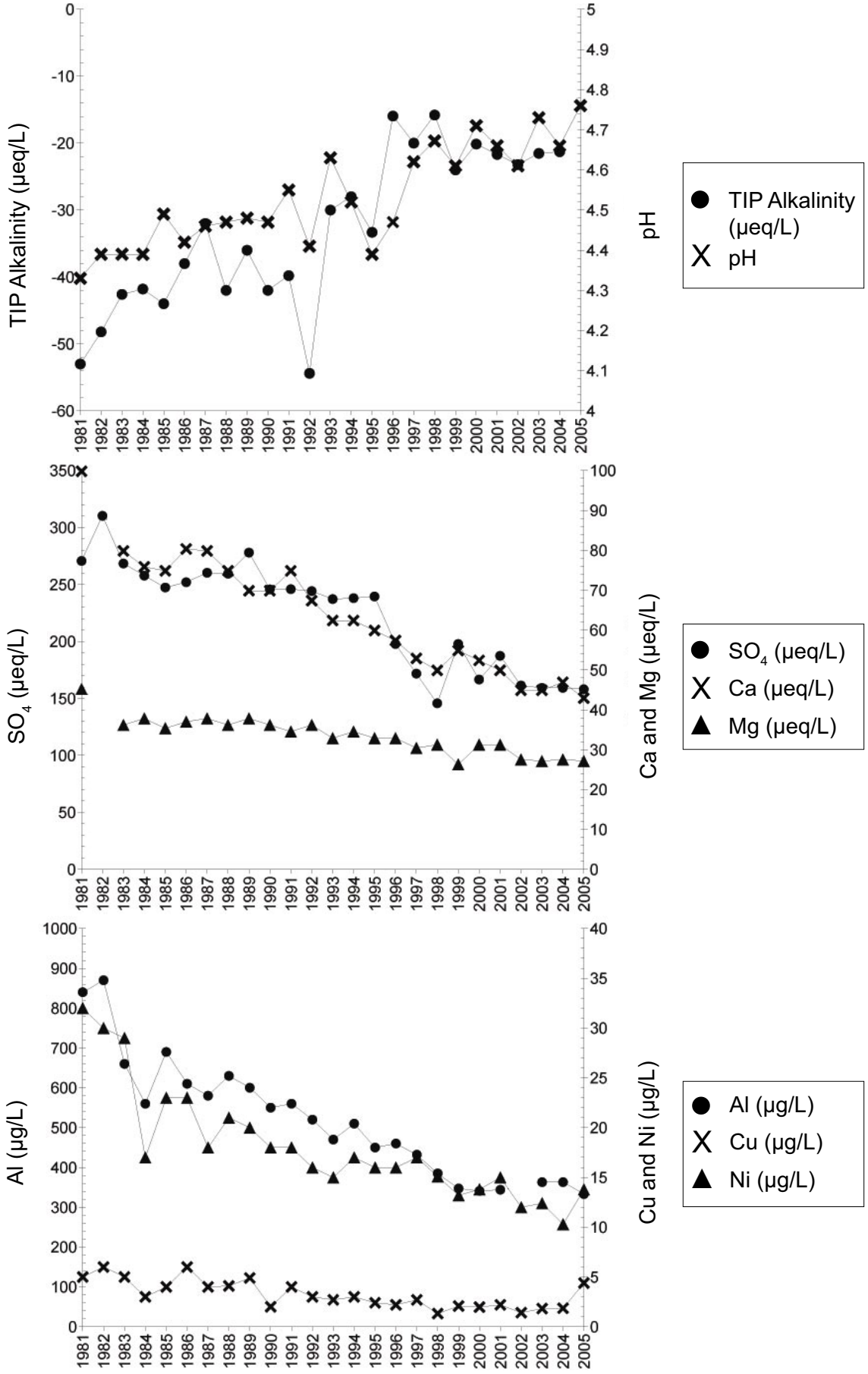
DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.1500 V	0.1000 V	0.0930 V	0.0020 V	0.0100 V	0.0130 V	0.0070 V	0.21 V	0.050 V	0.031 C	3.4 V	0.80 V
7/27/1982	0.0800 V	0.0980 V	0.1200 V	0.0040 V	0.0130 V	0.0130 V	N	N	N	N	N	N
8/01/1983	0.1100 V	0.0900 V	0.1200 V	0.0040 V	0.0130 V	0.0160 V	N	N	N	N	N	N
7/30/1984	0.1350 V	0.1350 V	0.0900 V	0.0030 V	0.0100 V	0.0120 V	N	N	N	N	N	N
7/14/1985	0.0940 V	0.1000 V	0.1100 V	0.0030 V	0.0130 V	0.0210 V	N	N	N	N	N	N
7/08/1986	0.1100 V	0.1100 V	0.1100 V	0.0030 V	0.0110 V	0.0120 V	N	N	N	N	N	N
7/22/1987	0.0750 V	0.0720 V	0.0700 V	0.0030 V	0.0100 V	0.0040 V	N	N	N	N	N	N
6/28/1988	0.0990 T	0.0830 V	0.1400 V	0.0035 V	0.0110 V	0.0140 V	N	N	N	N	3.8 V	N
7/05/1989	0.1000 T	0.0990 V	0.1400 V	0.0048 V	0.0120 V	0.0170 V	N	N	N	N	3.9 V	N
7/04/1990	0.0900 T	0.1000 V	0.1100 V	0.0040 V	0.0120 V	0.0120 V	0.0070 T	0.35 V	0.060 V	0.070 V	4.0 V	0.40 T
7/10/1991	0.0600 T	0.0860 V	0.0800 T	0.0030 V	0.0100 T	0.0110 V	0.0110 V	0.35 V	0.016 V	0.035 V	4.1 V	0.20 T
7/06/1992	O	0.0830 V	0.1300 V	0.0010 T	0.0120 V	0.0110 V	0.0070 T	0.28 V	0.038 V	0.070 V	3.8 V	0.20 T
7/21/1993	0.1000 T	0.0730 V	0.0880 T	0.0042 V	0.0100 T	0.0110 V	0.0060 T	0.28 V	0.028 V	0.050 V	4.7 V	0.40 T
7/11/1994	0.1200 V	0.0950 V	0.0990 T	0.0041 V	0.0100 T	0.0091 V	0.0080 T	0.28 V	0.052 V	0.105 V	4.1 V	0.60 T
7/05/1995	0.0400 T	0.0420 V	0.0500 T	0.0024 V	0.0095 V	0.0065 V	0.0200 V	0.28 V	0.016 V	0.005 W	4.8 V	0.20 W
7/03/1996	0.2200 V	0.1200 V	0.1000 V	0.0032 V	0.0090 V	0.0070 V	0.0140 V	0.34 V	0.064 V	0.005 W	4.2 V	0.20 W
7/15/1997	0.1130 V	0.0783 V	0.0600 V	0.0017 V	0.0084 V	0.0056 V	0.0096 V*	0.32 V	0.044 V	0.008 T	4.5 V	0.40 V
7/07/1998	0.0935 V	0.0420 V	0.0509 V	0.0026 V	0.0082 V	0.0055 V	0.0060 T	0.30 V	0.012 V	0.005 W	4.9 V	0.20 W
7/05/1999	0.0518 V	0.0132 V	0.0260 V	0.0021 V	0.0066 V	0.0040 V	0.0040 T	0.28 V	0.006 T	0.005 W	4.5 V	0.40 T
7/05/2000	0.0581 V	0.0183 V	0.0305 V	0.0016 V	0.0053 V	0.0039 V	0.0100 V	0.24 V	0.006 T	0.005 W	4.5 V	0.80 T
7/09/2001	0.0851 V	0.0563 V	0.0657 V	0.0024 V	0.0083 V	0.0056 V	0.0080 V	0.24 V	0.002 W	0.006 T	5.3 V	0.20 W
7/08/2002	0.0777 V	0.0464 V	0.0529 V	0.0030 V	0.0077 V	0.0063 V	0.0102 V*	0.26 V	0.044 V	0.008 T	N	0.36 V
7/14/2003	0.0809 V	0.0463 V	0.0655 V	0.0027 V	0.0076 V	0.0074 V	0.0061 V*	0.27 V	0.036 V	0.006 T	5.7 V	0.40 V
7/05/2004	0.0946 V	0.0283 V	0.0709 V	0.0021 V	0.0053 V	0.0043 V	0.0094 V*	0.16 V	0.024 V	0.004 T	4.7 V	0.54 V
7/12/2005	0.0373 V	0.0100 V	0.0320 V	0.0021 V	0.0064 V	0.0041 V	0.0063 V*	0.25 V	0.004 T	0.006 T	4.7 V	0.30 V

C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Marjorie Lake

SES ID #	243	**Shoreline length (km)**	10.01
Township	McConnell	**Maximum depth (m)**	35.0
Latitude	46°54’	**Mean depth (m)**	9.3
Longitude	80°37’	**Volume (x 10^4 m^3)**	694
Distance from Sudbury (km)	55	**Area (ha)**	75.82
Elevation (m)	323	**Road access**	No
Watershed code	2DC02		

Marjorie Lake



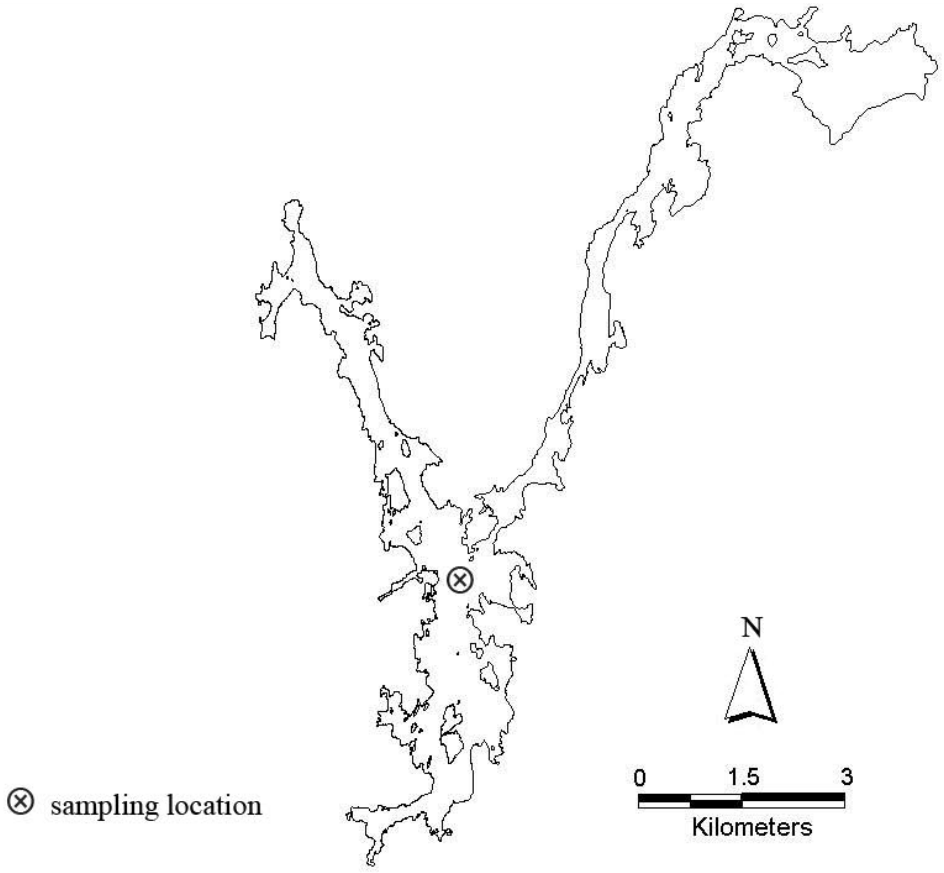
MARJORIE SES # 243

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/11/1981	10.70 V	4.33 V	48.0 V	-2.65 V	2.00 V	0.550 V	0.500 V	0.300 V	0.20 V	13.0 V	N	O	0.650 V
7/24/1982	10.50 V	4.39 V	44.0 V	-2.41 V	N	N	N	N	N	14.9 V	N	1.5 V	N
8/02/1983	9.50 V	4.39 V	42.0 V	-2.13 V	1.60 V	0.440 V	0.750 V	0.500 V	0.43 V	12.9 V	N	-1.8 V	0.820 V
7/23/1984	10.50 V	4.39 V	44.4 V	-2.09 V	1.52 V	0.460 V	0.530 V	0.230 V	0.18 V	12.4 V	1.5 V	N	0.840 V
7/23/1985	10.00 V	4.49 V	43.0 V	-2.20 V	1.50 V	0.430 V	0.440 V	0.330 V	0.20 V	11.9 V	1.5 V	N	0.760 V
8/07/1986	11.00 V	4.42 V	41.5 V	-1.90 V	1.61 V	0.450 V	0.520 V	0.250 V	0.20 V	12.1 V	0.5 T	N	0.660 V
7/16/1987	15.00 V	4.46 V	42.0 V	-1.60 V	1.60 V	0.460 V	0.600 V	0.260 V	0.20 T	12.5 V	0.5 W	N	0.800 V
7/21/1988	12.50 V	4.47 V	43.1 V	-2.10 V	1.50 V	0.440 V	0.620 V	0.290 V	0.70 T	12.5 V	1.0 T	N	0.720 V
7/18/1989	9.00 V	4.48 V	41.4 V	-1.80 V	1.40 V	0.460 V	0.560 V	0.260 V	0.20 W	13.4 V	0.5 T	N	0.920 V
7/18/1990	8.50 V	4.47 V	40.7 V	-2.10 V	1.40 V	0.440 V	0.620 V	0.290 V	0.20 T	11.8 V	1.5 T	N	0.840 V
7/10/1991	9.50 V	4.55 V	39.7 V	-1.99 C	1.50 V	0.420 V	0.660 V	0.270 V	0.30 T	11.8 V	0.5 T	N	0.680 V
7/14/1992	12.00 V	4.41 V	39.0 V	-2.72 C	1.35 V	0.440 V	0.600 V	0.336 V	0.30 T	11.7 V	1.0 T	N	0.840 V
7/13/1993	9.50 V	4.63 V	36.8 V	-1.50 V	1.25 V	0.400 V	0.590 V	0.317 V	0.20 W	11.4 V	0.2 W	N	0.940 V
7/28/1994	7.40 V	4.52 V	35.8 V	-1.40 V	1.25 V	0.420 V	0.600 V	0.350 V	0.20 W	11.4 V	0.2 T	N	0.600 V
7/10/1995	N	4.39 V	32.0 V	-1.67 C	1.20 V	0.400 V	0.600 V	0.370 V	0.40 T	11.5 V	0.8 T	N	0.800 V
7/08/1996	N	4.47 V	31.0 V	-0.80 C	1.15 V	0.400 V	0.640 V	0.360 V	O	9.5 V	0.8 T	N	0.820 V
7/15/1997	N	4.62 V	32.0 V	-1.00 V	1.06 V	0.370 V	0.555 V	0.310 V	0.24 V	8.3 V	1.8 V	N	0.760 V
7/12/1998	N	4.67 V	28.3 V	-0.79 V	1.00 V	0.380 V	0.600 V	0.310 V	0.20 W	7.0 V	N	N	0.640 V
7/14/1999	N	4.61 V	31.1 V	-1.20 V	1.10 V	0.320 V	0.500 V	0.280 V	0.20 W	9.5 V	N	N	0.440 V
7/17/2000	N	4.71 V	28.3 V	-1.01 V	1.05 V	0.380 V	0.600 V	0.270 V	0.20 W	8.0 V	N	N	0.600 V
7/02/2001	N	4.66 V	29.9 V	-1.08 V	1.00 V	0.380 V	0.600 V	0.280 V	0.20 W	9.0 V	N	N	0.640 V
7/09/2002	N	4.61 V	28.7 V	-1.16 V	0.90 V	0.335 V	0.570 V	0.240 V	0.28 V	7.8 V	N	N	0.840 V
7/17/2003	9.50 V	4.73 V	25.4 V	-1.08 V	0.90 V	0.330 V	0.565 V	0.240 V	0.22 V	7.7 V	N	N	0.680 V
7/12/2004	10.10 V	4.66 V	25.2 V	-1.06 V	0.94 V	0.335 V	0.585 V	0.215 V	0.25 V	7.7 V	N	N	0.860 V
7/05/2005	10.50 V	4.76 V	24.4 V	N	0.86 V	0.330 V	0.555 V	0.235 V	0.23 V	7.6 V	N	N	0.680 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/11/1981	0.0700 V	0.1880 V	0.8400 V	0.0050 V	0.0320 V	0.0190 V	0.0030 V	0.14 V	0.044 V	0.036 C	0.6 V	0.40 V
7/24/1982	N	N	0.8700 V	0.0060 V	0.0300 V	0.0180 V	N	N	N	N	N	N
8/02/1983	0.0600 V	0.1660 V	0.6600 V	0.0050 V	0.0290 V	O	N	N	N	N	N	N
7/23/1984	0.0950 V	0.1620 V	0.5600 V	0.0030 V	0.0170 V	0.0130 V	N	N	N	N	N	N
7/23/1985	0.0980 V	0.1900 V	0.6900 V	0.0040 V	0.0230 V	0.0190 V	N	N	N	N	N	N
8/07/1986	0.0690 V	0.1700 V	0.6100 V	0.0060 V	0.0230 V	0.0160 V	N	N	N	N	N	N
7/16/1987	0.0590 V	0.1600 V	0.5800 V	0.0040 V	0.0180 V	0.0140 V	N	N	N	N	N	N
7/21/1988	0.0600 T	0.1600 V	0.6300 V	0.0041 V	0.0210 V	0.0130 V	N	N	N	N	0.6 V	N
7/18/1989	0.0680 T	0.1400 V	0.6000 V	0.0049 V	0.0200 V	0.0130 V	N	N	N	N	0.6 V	N
7/18/1990	0.0700 T	0.1500 V	0.5500 V	0.0020 T	0.0180 V	0.0130 V	N	N	N	N	0.7 V	0.20 T
7/10/1991	0.0600 T	0.1500 V	0.5600 V	0.0040 V	0.0180 V	0.0120 V	0.0020 T	0.09 T	0.034 V	0.030 V	0.3 T	0.20 W
7/14/1992	0.0710 T	0.1400 V	0.5200 V	0.0030 V	0.0160 V	0.0110 V	0.0030 T	0.09 T	0.008 T	0.035 V	1.0 V	0.20 W
7/13/1993	0.0560 T	0.1300 V	0.4700 V	0.0027 V	0.0150 V	0.0087 V	0.0060 T	0.10 V	0.012 V	0.015 T	0.8 V	0.20 T
7/28/1994	0.0760 T	0.1600 V	0.5100 V	0.0030 V	0.0170 V	0.0110 V	0.0020 T	0.08 T	0.050 V	0.025 V	0.6 V	0.20 W
7/10/1995	0.0800 T	0.1500 V	0.4500 V	0.0024 V	0.0160 V	0.0100 V	O	O	0.012 V	0.025 V	0.6 V	0.20 T
7/08/1996	0.0800 T	0.1400 V	0.4600 V	0.0022 V	0.0160 V	0.0100 V	0.0020 W	0.12 V	0.022 V	0.005 W	0.5 V	0.20 W
7/15/1997	0.0588 V	0.1430 V	0.4320 V	0.0027 V	0.0170 V	0.0097 V	0.0015 V*	0.14 V	0.070 V	0.044 V	0.7 V	0.20 V
7/12/1998	0.0381 V	0.1380 V	0.3850 V	0.0013 V	0.0151 V	0.0088 V	0.0040 T	0.08 T	0.022 V	0.025 V	0.4 T	0.20 W
7/14/1999	0.0389 V	0.1380 V	0.3470 V	0.0021 V	0.0132 V	0.0080 V	0.0020 W	0.06 T	0.012 V	0.050 V	0.8 V	0.20 W
7/17/2000	0.0372 V	0.1400 V	0.3410 V	0.0020 V	0.0138 V	0.0086 V	0.0020 W	0.08 T	0.028 V	0.037 V	0.5 V	0.20 W
7/02/2001	0.0573 V	0.1490 V	0.3440 V	0.0022 V	0.0150 V	0.0089 V	0.0040 T	0.08 T	0.020 V	0.050 V	0.9 V	O
7/09/2002	0.0452 V	0.1160 V	O	0.0014 V	0.0120 V	0.0095 V	0.0030 V*	0.16 V	0.038 V	0.040 V	N	0.16 V
7/17/2003	0.0452 V	0.1240 V	0.3630 V	0.0018 V	0.0124 V	0.0097 V	0.0026 V*	0.12 V	0.030 V	0.026 V	1.1 V	0.24 V
7/12/2004	0.0384 V	0.1140 V	0.3630 V	0.0019 V	0.0103 V	0.0082 V	0.0019 V*	0.07 V	0.018 V	0.024 V	1.2 V	0.28 V
7/05/2005	0.0332 V	0.1320 V	0.3330 V	0.0044 V	0.0138 V	0.0086 V	0.0024 V*	0.23 V	N	N	1.2 V	0.44 V

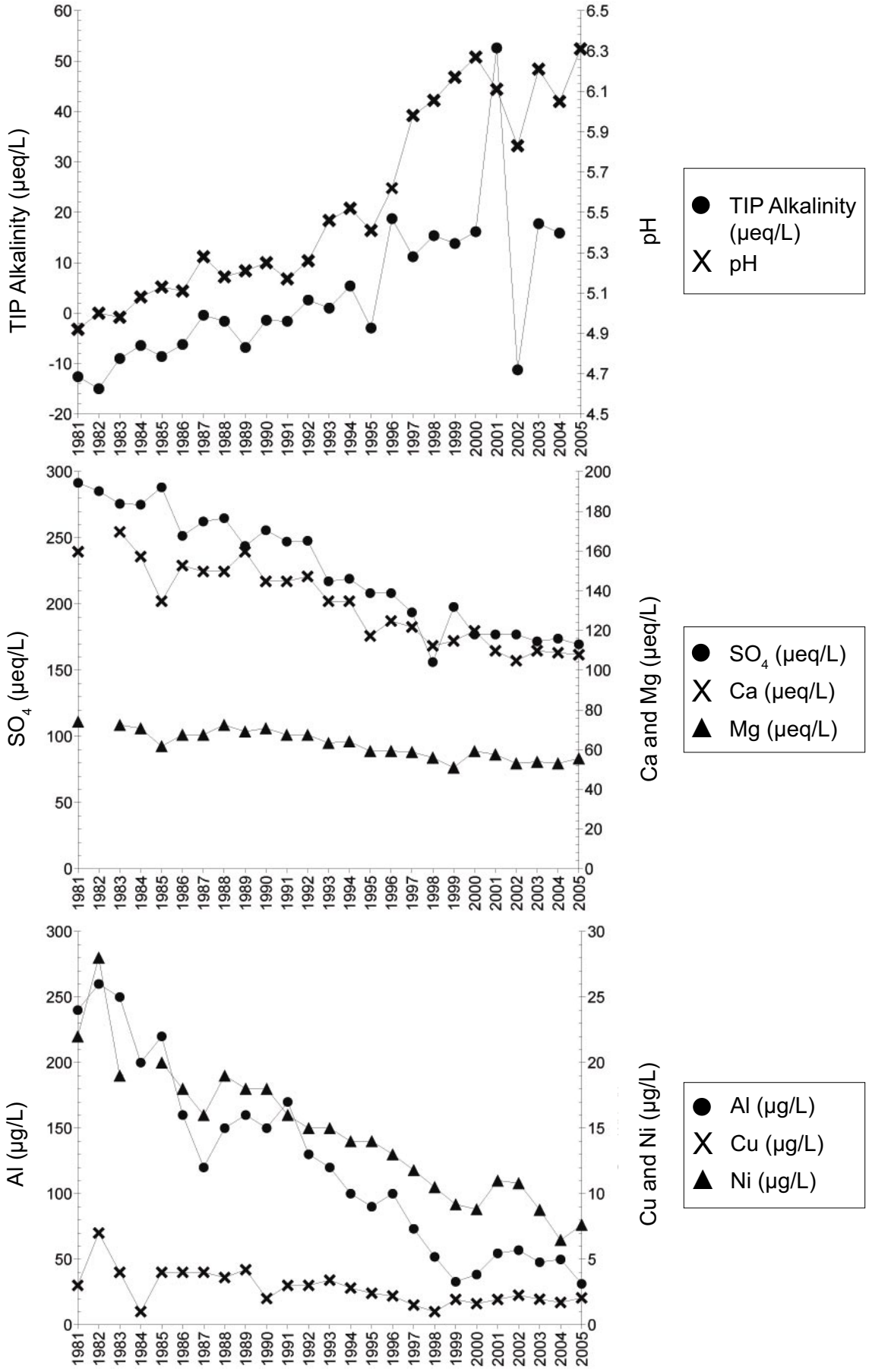
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Matagamasi Lake



SES ID #	51	**Shoreline length (km)**	89.33
Township	Rathbun/MacKelcan	**Maximum depth (m)**	61.0
Latitude	46°47’	**Mean depth (m)**	8.7
Longitude	80°37’	**Volume (x 10^4 m^3)**	12116
Distance from Sudbury (km)	48	**Area (ha)**	1316.45
Elevation (m)	269	**Road access**	Yes
Watershed code	2DC02		

Matagamasi Lake



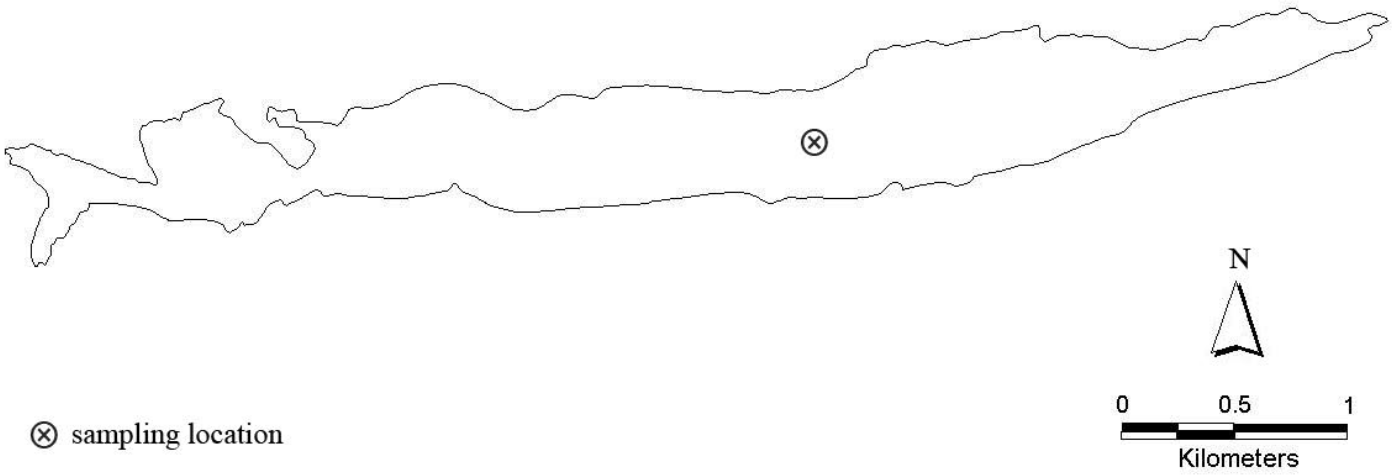
MATAGAMASI SES # 51

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
6/16/1981	9.20 V	4.92 V	42.0 V	-0.63 V	3.20 V	0.900 V	0.700 V	0.400 V	0.35 V	14.0 V	N	N	1.100 V
7/24/1982	6.50 V	5.00 V	41.0 V	-0.75 V	N	N	N	N	N	13.7 V	N	4.7 V	N
7/25/1983	7.00 V	4.98 V	40.8 V	-0.45 V	3.40 V	0.880 V	0.750 V	O	0.46 V	13.2 V	N	-0.4 V	1.000 V
7/23/1984	5.50 V	5.08 V	41.0 V	-0.32 V	3.15 V	0.860 V	0.670 V	0.300 V	0.34 V	13.2 V	6.0 V	N	0.950 V
7/23/1985	8.00 V	5.13 V	38.0 V	-0.43 V	2.70 V	0.750 V	0.630 V	0.340 V	0.28 V	13.8 V	5.0 V	N	1.060 V
8/07/1986	5.00 V	5.11 V	39.5 V	-0.31 V	3.06 V	0.820 V	0.650 V	0.330 V	0.30 V	12.1 V	3.0 V	N	0.960 V
7/16/1987	7.10 V	5.28 V	36.5 V	-0.02 V	3.00 V	0.820 V	0.720 V	0.300 V	0.30 V	12.6 V	3.0 V	N	0.840 V
7/14/1988	6.50 V	5.18 V	38.3 V	-0.08 V	3.00 V	0.880 V	0.720 V	0.350 V	0.40 T	12.7 V	4.0 V	N	0.900 V
7/26/1989	6.80 V	5.21 V	37.8 V	-0.34 V	3.20 V	0.840 V	0.760 V	0.380 V	0.30 T	11.7 V	5.0 V	N	1.040 V
7/19/1990	9.00 V	5.25 V	36.9 V	-0.07 V	2.90 V	0.860 V	0.760 V	0.370 V	0.40 T	12.3 V	5.0 V	N	0.980 V
7/10/1991	7.00 V	5.17 V	35.6 V	-0.08 C	2.90 V	0.820 V	0.840 V	0.350 V	0.30 T	11.9 V	4.5 V	N	1.020 V
7/14/1992	7.10 V	5.26 V	35.5 V	0.13 C	2.95 V	0.820 V	0.740 V	0.330 V	0.50 T	11.9 V	4.0 V	N	0.940 V
7/13/1993	6.00 V	5.46 V	34.0 V	0.05 V	2.70 V	0.770 V	0.800 V	0.374 V	0.40 T	10.4 V	4.8 V	N	0.880 V
7/28/1994	7.00 V	5.52 V	32.7 V	0.27 V	2.70 V	0.780 V	0.710 V	0.334 V	0.20 W	10.5 V	4.6 V	N	0.780 V
7/10/1995	N	5.41 V	31.0 V	-0.15 C	2.35 V	0.720 V	0.700 V	0.330 V	0.40 T	10.0 V	6.0 V	N	0.700 V
7/08/1996	N	5.62 V	31.0 V	0.94 C	2.50 V	0.720 V	0.740 V	0.340 V	0.40 T	10.0 V	6.4 V	N	0.880 V
7/15/1997	N	5.98 V	29.2 V	0.56 V	2.44 V	0.715 V	0.690 V	0.290 V	0.38 V	9.3 V	8.0 V	N	0.880 V
7/12/1998	N	6.06 V	27.7 V	0.77 V	2.25 V	0.680 V	0.740 V	0.340 V	0.40 T	7.5 V	N	N	0.780 V
7/14/1999	N	6.17 V	29.7 V	0.69 V	2.30 V	0.620 V	0.600 V	0.290 V	0.40 T	9.5 V	N	N	0.600 V
7/17/2000	N	6.27 V	28.6 V	0.81 V	2.40 V	0.720 V	0.760 V	0.310 V	0.40 T	8.5 V	N	N	0.640 V
7/02/2001	N	6.11 V	29.5 V	2.63 V	2.20 V	0.700 V	0.740 V	0.300 V	0.40 T	8.5 V	N	N	0.720 V
7/09/2002	N	5.83 V	26.9 V	-0.56 V	2.10 V	0.645 V	0.705 V	0.270 V	0.40 V	8.5 V	N	N	0.800 V
7/17/2003	4.60 V	6.21 V	25.2 V	0.89 V	2.20 V	0.655 V	0.710 V	0.290 V	0.33 V	8.3 V	N	N	0.700 V
7/12/2004	9.10 V	6.05 V	24.4 V	0.79 V	2.18 V	0.645 V	0.735 V	0.280 V	0.39 V	8.4 V	N	N	0.820 V
7/07/2005	6.10 V	6.31 V	25.2 V	N	2.16 V	0.675 V	0.745 V	0.315 V	0.45 V	8.2 V	N	N	0.600 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
6/16/1981	0.0300 V	0.1720 V	0.2400 V	0.0030 V	0.0220 V	0.0110 V	0.0010 V	0.10 V	0.002 V	0.091 C	2.0 V	0.60 V
7/24/1982	0.0450 V	0.1790 V	0.2600 V	0.0070 V	0.0280 V	0.0130 V	N	N	N	N	N	N
7/25/1983	0.0300 V	0.1480 V	0.2500 V	0.0040 V	0.0190 V	0.0170 V	N	N	N	N	N	N
7/23/1984	0.0600 V	0.1460 V	0.2000 V	0.0010 L	O	O	N	N	N	N	N	N
7/23/1985	0.0420 V	0.1400 V	0.2200 V	0.0040 V	0.0200 V	0.0160 V	N	N	N	N	N	N
8/07/1986	0.0280 V	0.1200 V	0.1600 V	0.0040 V	0.0180 V	0.0100 V	N	N	N	N	N	N
7/16/1987	0.0220 V	0.0990 V	0.1200 V	0.0040 V	0.0160 V	0.0090 V	N	N	N	N	N	N
7/14/1988	0.0230 T	0.1200 V	0.1500 V	0.0036 V	0.0190 V	0.0084 V	N	N	N	N	1.7 V	N
7/26/1989	0.0430 T	0.1200 V	0.1600 V	0.0042 V	0.0180 V	0.0100 V	N	N	N	N	1.7 V	N
7/19/1990	0.0300 T	0.1100 V	0.1500 V	0.0020 T	0.0180 V	0.0090 V	N	N	N	N	1.6 V	0.40 T
7/10/1991	0.0200 W	0.1100 V	0.1700 V	0.0030 V	0.0160 V	0.0090 V	0.0030 T	0.15 V	0.018 V	0.030 V	1.9 V	0.20 T
7/14/1992	0.0200 W	0.0820 V	0.1300 V	0.0030 V	0.0150 V	0.0080 V	0.0070 T	0.18 V	0.020 V	0.040 V	2.9 V	0.20 W
7/13/1993	0.0300 T	0.0750 V	0.1200 V	0.0034 V	0.0150 V	0.0075 V	0.0080 T	0.24 V	0.022 V	0.035 V	2.1 V	0.20 T
7/28/1994	0.0340 T	0.0820 V	0.1000 T	0.0028 V	0.0140 V	0.0070 V	0.0040 T	0.14 V	0.026 V	0.025 V	2.1 V	0.20 T
7/10/1995	0.0400 T	0.0860 V	0.0900 T	0.0024 V	0.0140 V	0.0060 V	0.0020 W	0.14 V	0.004 T	0.005 W	2.0 V	0.20 W
7/08/1996	0.0200 W	0.0760 V	0.1000 V	0.0022 V	0.0130 V	0.0060 V	0.0020 W	0.16 V	0.006 T	0.005 W	2.1 V	0.20 W
7/15/1997	0.0275 V	0.0641 V	0.0732 V	0.0015 V	0.0118 V	0.0053 V	0.0040 V*	0.16 V	0.028 V	0.016 V	2.2 V	0.20 V
7/12/1998	0.0177 V	0.0574 V	0.0518 V	0.0010 V	0.0105 V	0.0048 V	0.0040 T	0.18 V	0.002 W	0.005 W	2.2 V	0.20 W
7/14/1999	0.0221 V	0.0553 V	0.0328 V	0.0019 V	0.0092 V	0.0035 V	0.0040 T	0.16 V	0.002 W	0.015 T	2.6 V	0.40 T
7/17/2000	0.0187 V	0.0461 V	0.0383 V	0.0016 V	0.0088 V	0.0037 V	0.0020 W	0.18 V	0.004 T	0.005 W	2.3 V	0.20 W
7/02/2001	0.0309 V	0.0589 V	0.0545 V	0.0019 V	0.0110 V	0.0041 V	0.0040 T	0.16 V	0.010 V	0.015 T	2.8 V	O
7/09/2002	0.0181 V	0.0585 V	0.0569 V	0.0023 V	0.0108 V	0.0051 V	0.0036 V*	0.17 V	0.026 V	0.032 V	N	0.20 V
7/17/2003	0.0273 V	0.0608 V	0.0477 V	0.0020 V	0.0088 V	0.0045 V	0.0039 V*	0.18 V	0.026 V	0.006 T	3.1 V	0.34 V
7/12/2004	0.0238 V	0.0385 V	0.0498 V	0.0017 V	0.0065 V	0.0047 V	0.0023 V*	0.14 V	0.018 V	0.014 V	2.3 V	0.34 V
7/07/2005	0.0238 V	0.0266 V	0.0312 V	0.0021 V	0.0076 V	0.0162 V	0.0064 V*	0.15 V	N	N	2.4 V	0.58 V

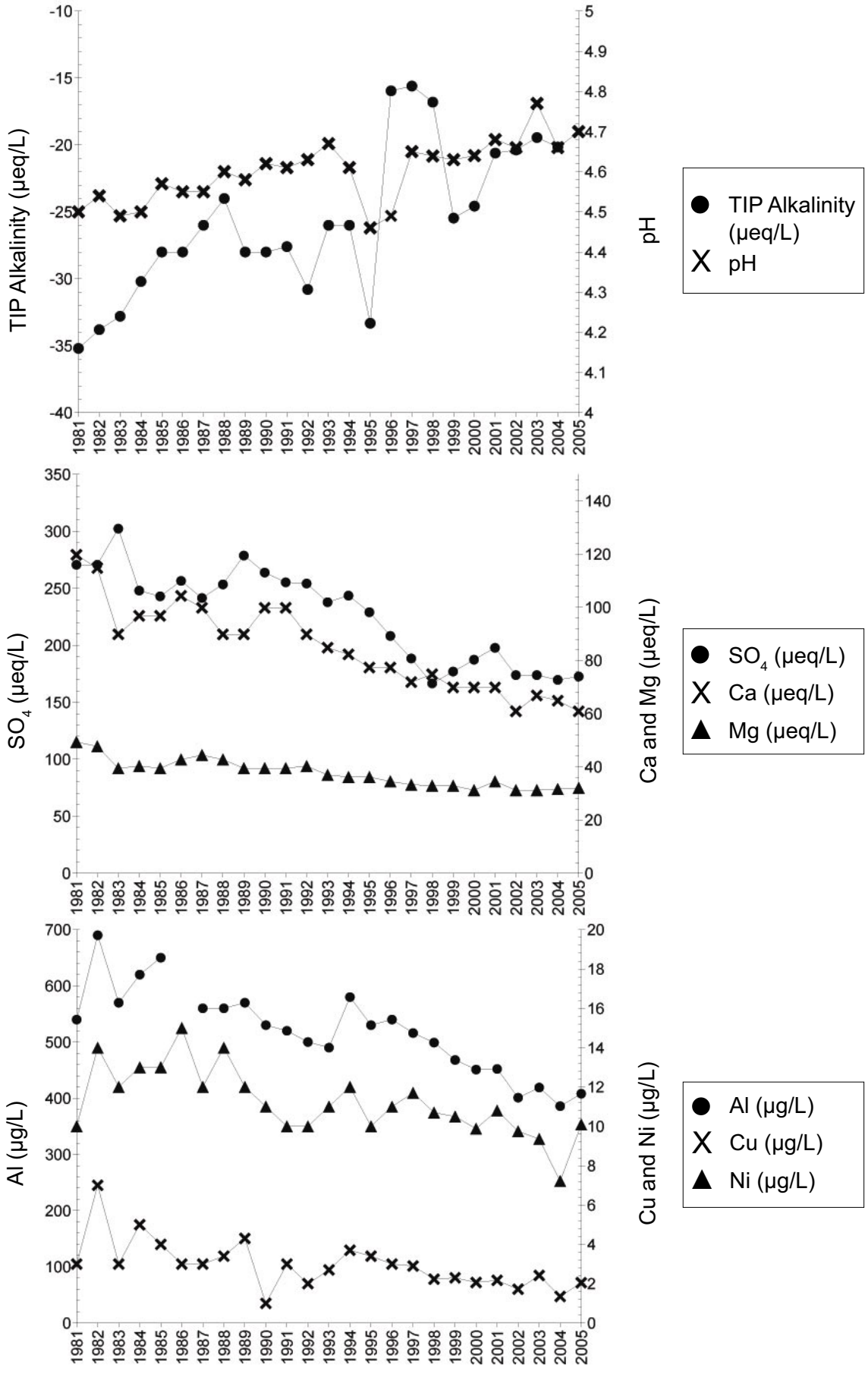
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Nellie Lake



SES ID #	71	**Shoreline length (km)**	15.03
Township	Roosevelt	**Maximum depth (m)**	54.9
Latitude	46°07’	**Mean depth (m)**	22.0
Longitude	81°31’	**Volume (x 10^4 m^3)**	5115
Distance from Sudbury (km)	56	**Area (ha)**	247.50
Elevation (m)	267	**Road access**	No
Watershed code	2CF05		

Nellie Lake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pH
TIP Alkalinity (µeq/L)
pH
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Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

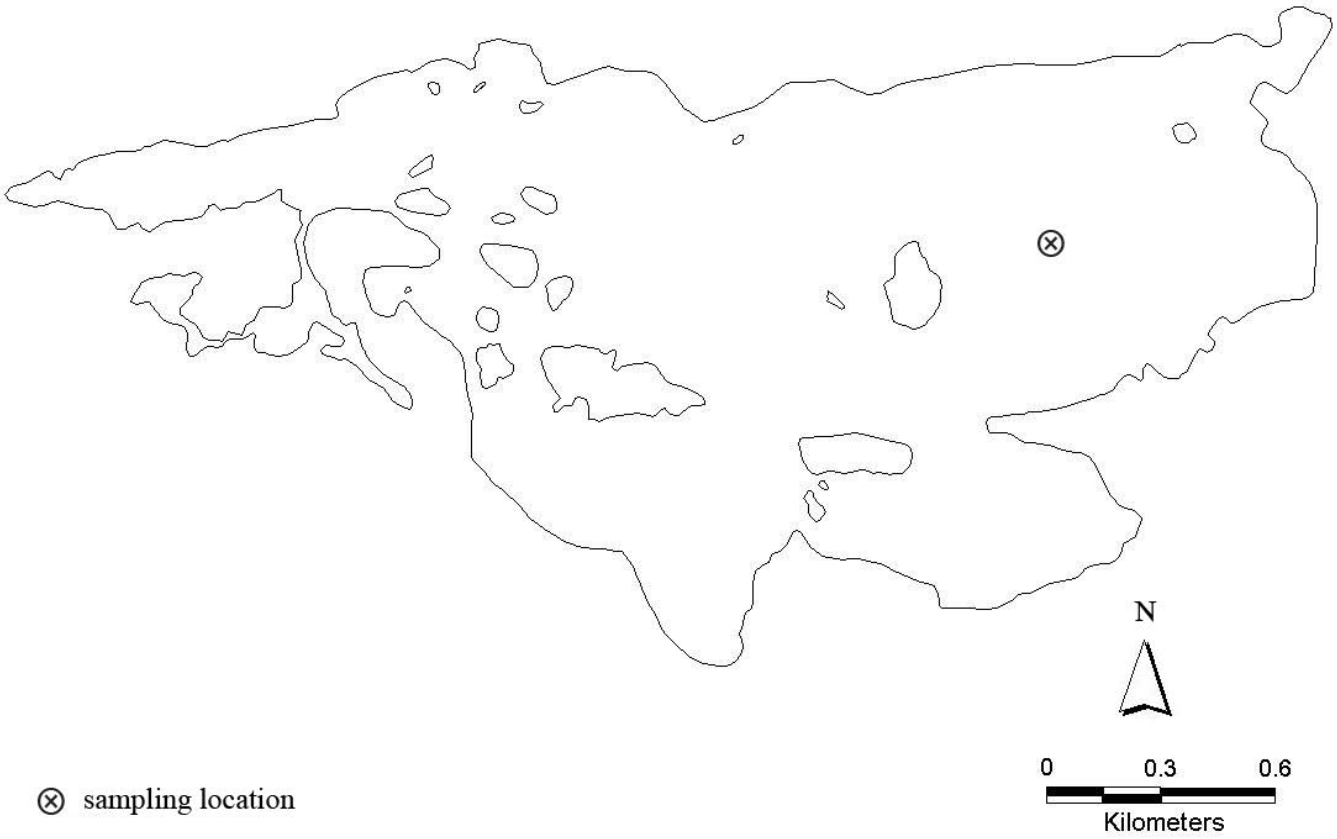
NELLIE SES # 71

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	23.40 V	4.50 V	44.0 V	-1.76 V	2.40 V	0.600 V	0.400 V	0.250 V	0.50 V	13.0 V	N	1.4 V	0.350 V
7/27/1982	19.00 V	4.54 V	43.0 V	-1.69 V	2.30 V	0.580 V	N	N	N	13.0 V	N	1.8 V	N
8/07/1983	23.00 V	4.49 V	44.2 V	-1.64 V	1.80 V	0.480 V	0.650 V	0.340 V	0.51 V	14.5 V	N	2.2 V	0.420 V
7/26/1984	31.00 V	4.50 V	42.5 V	-1.51 V	1.94 V	0.490 V	0.480 V	0.270 V	0.43 V	11.9 V	0.5 W	N	0.470 V
7/30/1985	29.00 V	4.57 V	43.0 V	-1.40 V	1.94 V	0.480 V	0.540 V	0.270 V	0.27 V	11.7 V	0.5 W	N	0.410 V
7/14/1986	19.00 V	4.55 V	42.0 V	-1.40 V	2.09 V	0.520 V	0.480 V	0.250 V	0.85 V	12.3 V	0.5 W	N	0.440 V
7/20/1987	22.00 V	4.55 V	43.0 V	-1.30 V	2.00 V	0.540 V	0.520 V	0.250 V	0.45 V	11.6 V	0.5 T	N	0.360 V
7/12/1988	27.00 V	4.60 V	41.6 V	-1.20 V	1.80 V	0.520 V	0.540 V	0.280 V	0.50 T	12.2 V	0.5 W	N	0.380 V
7/17/1989	21.00 V	4.58 V	41.8 V	-1.40 V	1.80 V	0.480 V	0.500 V	0.260 V	0.40 T	13.4 V	0.5 W	N	0.480 V
7/17/1990	26.00 V	4.62 V	41.9 V	-1.40 V	2.00 V	0.480 V	0.560 V	0.270 V	0.60 T	12.7 V	0.5 W	N	0.380 V
7/11/1991	28.50 V	4.61 V	41.0 V	-1.38 C	2.00 V	0.480 V	0.520 V	0.250 V	0.20 T	12.3 V	0.5 W	N	0.380 V
7/07/1992	23.00 V	4.63 V	40.2 V	-1.54 C	1.80 V	0.490 V	0.540 V	0.270 V	0.50 T	12.2 V	0.5 W	N	0.360 V
7/14/1993	25.00 V	4.67 V	38.9 V	-1.30 V	1.70 V	0.450 V	0.520 V	0.232 V	0.30 T	11.4 V	0.2 W	N	0.460 V
7/27/1994	25.50 V	4.61 V	38.3 V	-1.30 V	1.65 V	0.440 V	0.500 V	0.228 V	0.20 T	11.7 V	0.2 W	N	0.440 V
7/10/1995	N	4.46 V	35.0 V	-1.67 C	1.55 V	0.440 V	0.480 V	0.230 V	0.40 T	11.0 V	O	N	0.480 V
7/08/1996	N	4.49 V	33.0 V	-0.80 C	1.55 V	0.420 V	0.500 V	0.230 V	0.40 T	10.0 V	1.0 V	N	0.460 V
7/15/1997	N	4.65 V	34.8 V	-0.78 V	1.44 V	0.405 V	0.445 V	0.190 V	0.40 V	9.1 V	1.0 V	N	0.460 V
7/06/1998	N	4.64 V	33.5 V	-0.84 V	1.50 V	0.400 V	0.480 V	0.220 V	0.40 T	8.0 V	N	N	0.420 V
7/06/1999	N	4.63 V	34.3 V	-1.27 V	1.40 V	0.400 V	0.500 V	0.230 V	0.40 T	8.5 V	N	N	0.280 V
7/05/2000	N	4.64 V	32.1 V	-1.23 V	1.40 V	0.380 V	0.460 V	0.220 V	0.60 T	9.0 V	N	N	0.260 V
7/04/2001	N	4.68 V	32.7 V	-1.03 V	1.40 V	0.420 V	0.500 V	0.220 V	0.40 T	9.5 V	N	N	0.360 V
7/09/2002	N	4.66 V	31.4 V	-1.02 V	1.22 V	0.380 V	0.480 V	0.210 V	0.46 V	8.4 V	N	N	0.360 V
7/18/2003	19.50 V	4.77 V	30.0 V	-0.97 V	1.34 V	0.380 V	0.525 V	0.250 V	O	8.4 V	N	N	0.380 V
7/06/2004	24.50 V	4.66 V	29.4 V	-1.01 V	1.30 V	0.385 V	0.500 V	0.240 V	0.48 V	8.2 V	N	N	0.440 V
7/05/2005	16.00 V	4.70 V	29.0 V	N	1.22 V	0.390 V	0.500 V	0.265 V	0.49 V	8.3 V	N	N	0.360 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0700 V	0.2440 V	0.5400 V	0.0030 V	0.0100 V	0.0260 V	0.0010 V	0.06 V	0.032 V	0.176 C	0.1 T	0.20 T
7/27/1982	0.0500 V	0.2840 V	0.6900 V	0.0070 V	0.0140 V	0.0310 V	N	N	N	N	N	N
8/07/1983	0.0550 V	0.2600 V	0.5700 V	0.0030 V	0.0120 V	0.0260 V	N	N	N	N	N	N
7/26/1984	0.1000 V	0.2500 V	0.6200 V	0.0050 V	0.0130 V	O	N	N	N	N	N	N
7/30/1985	0.0500 V	0.2500 V	0.6500 V	0.0040 V	0.0130 V	0.0310 V	N	N	N	N	N	N
7/14/1986	0.0400 L	0.0180 V	O	0.0030 L	0.0150 L	0.0110 V	N	N	N	N	N	N
7/20/1987	0.0550 V	0.2500 V	0.5600 V	0.0030 V	0.0120 V	0.0270 V	N	N	N	N	N	N
7/12/1988	0.0700 T	0.2600 V	0.5600 V	0.0034 V	0.0140 V	0.0240 V	N	N	N	N	0.1 W	N
7/17/1989	0.0700 T	0.2600 V	0.5700 V	0.0043 V	0.0120 V	0.0240 V	N	N	N	N	0.1 W	N
7/17/1990	0.0700 T	0.2400 V	0.5300 V	0.0010 T	0.0110 V	0.0230 V	N	N	N	N	0.1 W	0.20 T
7/11/1991	0.0600 T	0.2300 V	0.5200 V	0.0030 V	0.0100 T	0.0230 V	0.0020 W	0.10 V	0.038 V	0.165 V	0.1 W	0.20 W
7/07/1992	0.0970 T	0.2200 V	0.5000 V	0.0020 T	0.0100 T	0.0220 V	0.0020 T	0.07 T	0.052 V	0.160 V	0.6 V	0.20 W
7/14/1993	0.0460 T	0.2000 V	0.4900 V	0.0027 V	0.0110 V	0.0200 V	0.0020 T	0.08 T	0.040 V	0.160 V	1.0 V	0.20 T
7/27/1994	0.0580 T	0.2400 V	0.5800 V	0.0037 V	0.0120 V	0.0240 V	0.0020 W	0.08 T	0.052 V	0.140 V	0.1 T	0.20 W
7/10/1995	0.0400 T	0.2200 V	0.5300 V	0.0034 V	0.0100 V	0.0220 V	0.0020 T	0.06 T	0.040 V	0.160 V	0.1 W	0.20 W
7/08/1996	0.0400 T	0.2000 V	0.5400 V	0.0030 V	0.0110 V	0.0220 V	0.0020 W	0.12 V	0.040 V	O	0.1 W	0.20 W
7/15/1997	0.0499 V	0.2100 V	0.5160 V	0.0029 V	0.0117 V	0.0206 V	0.0004 T*	0.18 V	0.050 V	0.174 V	0.2 T	0.14 V
7/06/1998	0.0421 V	0.2010 V	0.4990 V	0.0022 V	0.0107 V	0.0208 V	0.0020 W	0.08 T	0.030 V	0.170 V	0.1 W	0.20 W
7/06/1999	0.0363 V	0.1910 V	0.4680 V	0.0023 V	0.0105 V	0.0201 V	0.0020 W	0.08 T	0.022 V	0.180 V	0.2 T	0.20 W
7/05/2000	0.0212 V	0.1900 V	0.4510 V	0.0021 V	0.0099 V	0.0192 V	0.0040 T	0.04 T	0.018 V	0.179 V	0.1 W	0.20 W
7/04/2001	0.0411 V	0.1890 V	0.4520 V	0.0022 V	0.0108 V	0.0179 V	0.0020 W	0.04 T	0.038 V	0.195 V	0.1 W	0.20 W
7/09/2002	0.0386 V	0.1610 V	0.4010 V	0.0017 V	0.0098 V	0.0185 V	0.0005 T*	0.08 V	0.038 V	0.180 V	N	0.20 V
7/18/2003	0.0372 V	0.1600 V	0.4190 V	0.0024 V	0.0094 V	0.0185 V	0.0038 V*	0.16 V	0.060 V	0.182 V	0.1 W	0.32 V
7/06/2004	0.0265 V	0.1290 V	0.3860 V	0.0014 V	0.0072 V	0.0145 V	0.0007 T*	O	0.040 V	0.184 V	0.1 W	0.30 V
7/05/2005	0.0307 V	0.1650 V	0.4080 V	0.0021 V	0.0101 V	0.0193 V	0.0011 V*	0.08 V	N	N	0.3 T	0.40 V

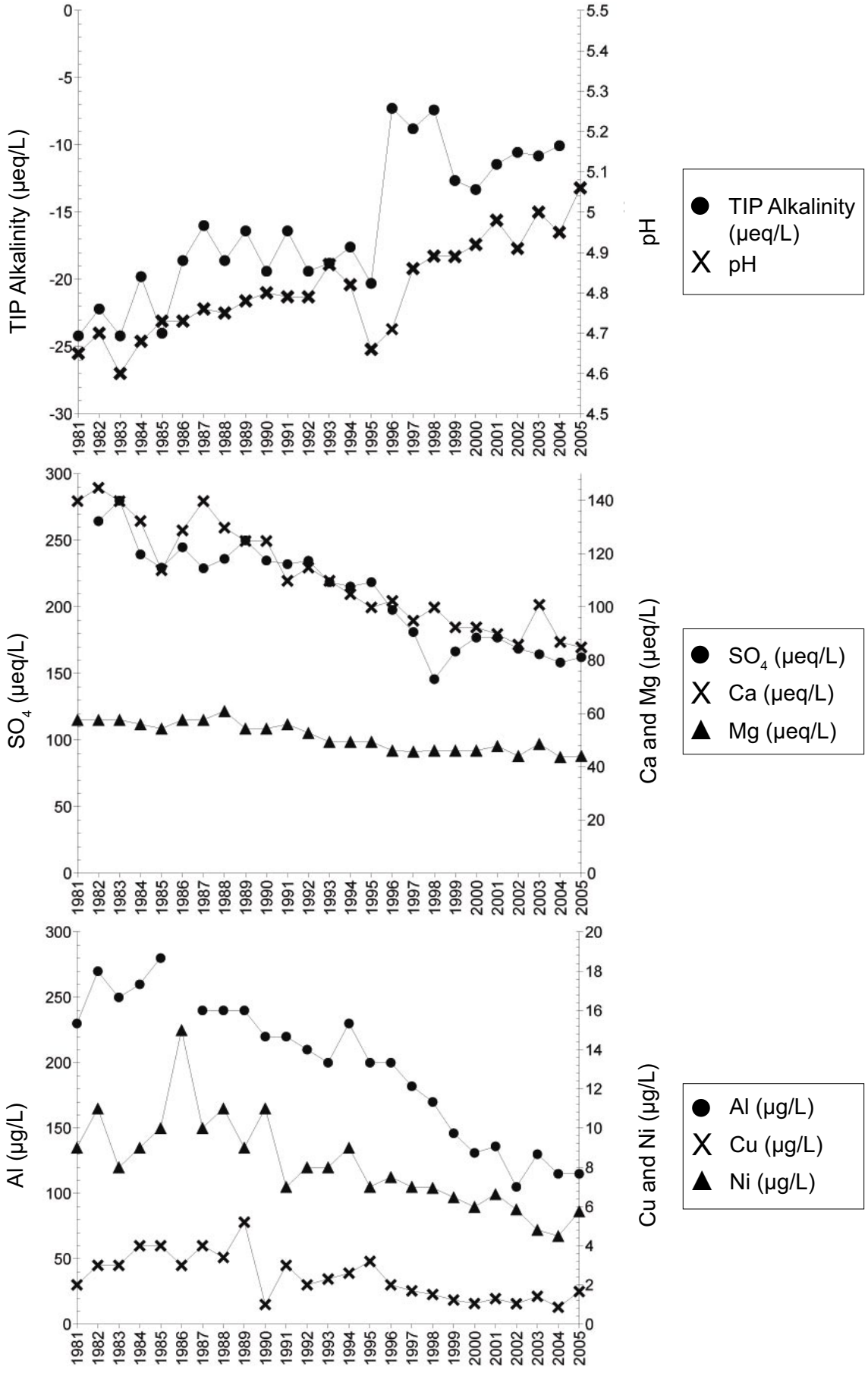
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

O.S.A. Lake



SES ID #	79	**Shoreline length (km)**	14.00
Township	Killarney	**Maximum depth (m)**	39.7
Latitude	46°03’	**Mean depth (m)**	12.0
Longitude	81°24’	**Volume (x 10^4 m^3)**	3441
Distance from Sudbury (km)	56	**Area (ha)**	274.47
Elevation (m)	205	**Road access**	No
Watershed code	2CF03		

O.S.A. Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

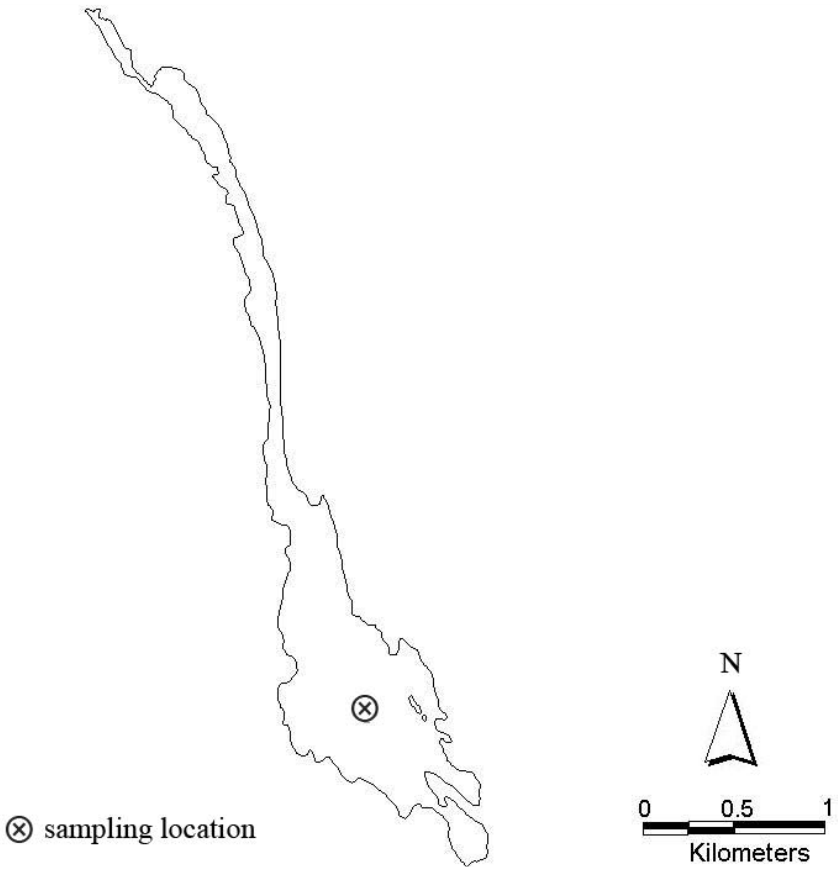
O.S.A. SES # 79

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	18.30 V	4.65 V	42.0 V	-1.21 V	2.80 V	0.700 V	N	N	N	N	N	N	N
7/27/1982	19.50 V	4.70 V	40.0 V	-1.11 V	2.90 V	0.700 V	N	N	N	12.7 V	N	2.0 V	N
8/04/1983	16.00 V	4.60 V	40.8 V	-1.21 V	2.80 V	0.700 V	0.650 V	0.360 V	0.49 V	13.4 V	N	4.6 V	0.260 V
7/26/1984	19.00 V	4.68 V	39.5 V	-0.99 V	2.65 V	0.680 V	0.610 V	0.330 V	0.51 V	11.5 V	0.5 W	N	0.190 V
7/30/1985	20.00 V	4.73 V	39.0 V	-1.20 V	2.28 V	0.660 V	0.620 V	0.310 V	0.30 V	11.0 V	0.5 W	N	0.250 V
7/14/1986	15.00 V	4.73 V	39.0 V	-0.93 V	2.58 V	0.700 V	0.570 V	0.300 V	0.75 V	11.8 V	0.5 W	N	0.260 V
7/20/1987	16.80 V	4.76 V	39.5 V	-0.80 V	2.80 V	0.700 V	0.640 V	0.290 V	0.50 V	11.0 V	0.5 W	N	0.160 V
7/12/1988	19.50 V	4.75 V	39.5 V	-0.93 V	2.60 V	0.740 V	0.720 V	0.340 V	0.50 T	11.3 V	0.5 W	N	0.160 V
7/17/1989	14.50 V	4.78 V	38.8 V	-0.82 V	2.50 V	0.660 V	0.600 V	0.340 V	0.40 T	12.0 V	0.5 W	N	0.200 T
7/17/1990	18.00 V	4.80 V	38.0 V	-0.97 V	2.50 V	0.660 V	0.680 V	0.340 V	0.50 T	11.3 V	0.5 W	N	0.220 T
7/11/1991	22.30 V	4.79 V	37.2 V	-0.82 C	2.20 V	0.680 V	0.640 V	0.330 V	0.30 T	11.2 V	0.5 W	N	0.220 T
7/07/1992	20.00 V	4.79 V	36.3 V	-0.97 C	2.30 V	0.640 V	0.640 V	0.310 V	0.40 T	11.3 V	0.5 T	N	0.240 V
7/14/1993	23.40 V	4.87 V	34.9 V	-0.94 V	2.20 V	0.600 V	0.640 V	0.301 V	0.40 T	10.5 V	0.2 W	N	0.380 V
7/27/1994	16.50 V	4.82 V	34.7 V	-0.88 V	2.10 V	0.600 V	0.600 V	0.276 V	0.20 T	10.3 V	0.2 W	N	0.340 V
7/10/1995	N	4.66 V	32.0 V	-1.02 C	2.00 V	0.600 V	0.600 V	0.270 V	0.40 T	10.5 V	0.2 W	N	0.380 V
7/08/1996	N	4.71 V	30.0 V	-0.36 C	2.05 V	0.560 V	0.600 V	0.280 V	0.40 T	9.5 V	0.6 T	N	0.380 V
7/15/1997	N	4.86 V	31.5 V	-0.44 V	1.90 V	0.555 V	0.555 V	0.230 V	0.40 V	8.7 V	1.2 V	N	0.380 V
7/07/1998	N	4.89 V	30.7 V	-0.37 V	2.00 V	0.560 V	0.600 V	0.270 V	0.40 T	7.0 V	N	N	0.300 V
7/06/1999	N	4.89 V	31.2 V	-0.63 V	1.85 V	0.560 V	0.600 V	0.280 V	0.40 T	8.0 V	N	N	0.100 V
7/05/2000	N	4.92 V	30.5 V	-0.67 V	1.85 V	0.560 V	0.600 V	0.280 V	0.40 T	8.5 V	N	N	0.160 V
7/05/2001	N	4.98 V	30.6 V	-0.57 V	1.80 V	0.580 V	0.680 V	0.290 V	0.80 T	8.5 V	N	N	0.240 V
7/09/2002	17.50 V	4.91 V	29.0 V	-0.53 V	1.72 V	0.535 V	0.600 V	0.260 V	0.47 V	8.1 V	N	N	0.280 V
7/16/2003	17.30 V	5.00 V	24.8 V	-0.54 V	2.02 V	0.590 V	O	0.300 V	0.41 V	7.9 V	N	N	0.260 V
7/06/2004	20.70 V	4.95 V	26.8 V	-0.50 V	1.74 V	0.530 V	0.595 V	0.275 V	0.45 V	7.6 V	N	N	0.380 V
7/04/2005	14.00 V	5.06 V	26.6 V	N	1.70 V	0.535 V	0.605 V	0.270 V	0.45 V	7.8 V	N	N	0.280 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	N	N	0.2300 V	0.0020 V	0.0090 V	0.0250 V	0.0010 V	0.07 V	0.024 V	0.269 C	0.3 V	0.40 V
7/27/1982	0.0150 T	0.2890 V	0.2700 V	0.0030 V	0.0110 V	0.0280 V	N	N	N	N	N	N
8/04/1983	0.0100 V	0.2300 V	0.2500 V	0.0030 V	0.0080 V	0.0330 V	N	N	N	N	N	N
7/26/1984	0.0300 T	0.2200 V	0.2600 V	0.0040 V	0.0090 V	0.0430 V	N	N	N	N	N	N
7/30/1985	0.0250 V	0.2200 V	0.2800 V	0.0040 V	0.0100 V	0.0310 V	N	N	N	N	N	N
7/14/1986	0.0400 L	0.2500 V	O	0.0030 L	0.0150 L	0.0310 V	N	N	N	N	N	N
7/20/1987	0.0470 V	0.2000 V	0.2400 V	0.0040 V	0.0100 V	N	N	N	N	N	N	N
7/12/1988	0.0200 W	0.2200 V	0.2400 V	0.0034 V	0.0110 V	0.0230 V	N	N	N	N	0.1 T	N
7/17/1989	0.0200 W	0.2000 V	0.2400 V	0.0052 V	0.0090 T	0.0240 V	N	N	N	N	0.1 T	N
7/17/1990	0.0400 T	0.1900 V	0.2200 V	0.0010 T	0.0110 V	0.0210 V	N	N	N	N	0.1 W	0.20 T
7/11/1991	0.0200 W	0.1700 V	0.2200 V	0.0030 V	0.0070 T	0.0220 V	0.0020 W	0.10 V	0.020 V	0.245 V	0.2 T	0.20 W
7/07/1992	0.0200 W	0.1600 V	0.2100 V	0.0020 T	0.0080 T	0.0210 V	0.0020 T	0.08 T	0.032 V	0.230 V	0.7 V	0.20 W
7/14/1993	0.0200 W	0.1300 V	0.2000 V	0.0023 T	0.0080 T	0.0170 V	0.0040 T	0.08 T	0.020 V	0.225 V	0.4 T	0.20 T
7/27/1994	0.0200 W	0.1600 V	0.2300 V	0.0026 V	0.0090 T	0.0220 V	0.0020 T	0.08 T	0.044 V	0.090 V	0.3 T	0.20 W
7/10/1995	0.0200 W	0.1400 V	0.2000 V	0.0032 V	0.0070 V	0.0180 V	0.0020 W	0.06 T	0.020 V	0.230 V	0.3 T	0.40 T
7/08/1996	0.0200 W	0.1300 V	0.2000 V	0.0020 V	0.0075 V	0.0180 V	0.0020 W	0.12 V	0.030 V	0.170 V	0.2 T	0.20 W
7/15/1997	0.0114 V	0.1330 V	0.1820 V	0.0017 V	0.0070 V	0.0173 V	0.0014 V*	0.12 V	0.031 V	0.256 V	0.4 T	0.20 V
7/07/1998	0.0093 V	0.1240 V	0.1700 V	0.0015 V	0.0070 V	0.0169 V	0.0020 W	0.08 T	0.022 V	0.250 V	0.4 T	0.20 W
7/06/1999	0.0093 V	0.1230 V	0.1460 V	0.0012 V	0.0065 V	0.0167 V	0.0020 W	0.08 T	0.018 V	0.250 V	0.3 T	0.20 W
7/05/2000	0.0038 V	0.1170 V	0.1310 V	0.0011 V	0.0060 V	0.0157 V	0.0040 T	0.06 T	0.012 V	0.235 V	0.2 T	0.40 T
7/05/2001	0.0101 V	0.1120 V	0.1360 V	0.0013 V	0.0066 V	0.0154 V	0.0080 T	0.08 T	0.024 V	0.237 V	0.4 T	0.20 W
7/09/2002	0.0083 V	0.0929 V	0.1050 V	0.0010 V	0.0059 V	0.0140 V	0.0061 V*	0.09 V	0.030 V	0.240 V	N	0.14 V
7/16/2003	0.0106 V	0.0937 V	0.1300 V	0.0014 V	0.0048 V	0.0147 V	0.0017 V*	0.10 V	0.044 V	0.246 V	0.5 V	0.18 V
7/06/2004	0.0076 V	0.0695 V	0.1150 V	0.0009 V	0.0045 V	0.0107 V	0.0024 V*	0.02 T	0.024 V	0.232 V	0.3 T	0.34 V
7/04/2005	0.0112 V	0.0833 V	0.1150 V	0.0017 V	0.0058 V	0.0138 V	0.0008 T*	0.04 V	N	N	0.8 V	O

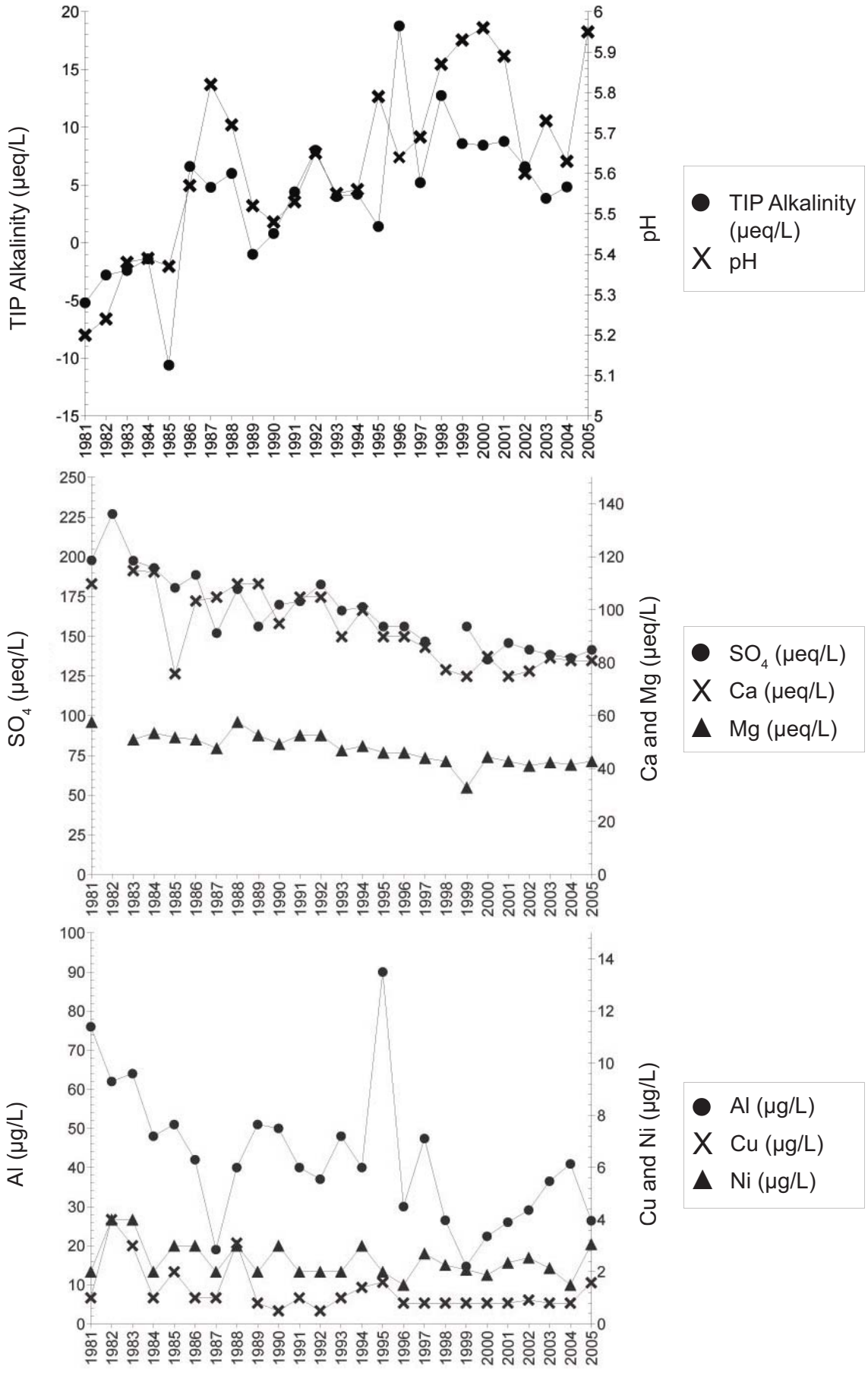
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Pilgrim Lake



SES ID #	249	**Shoreline length (km)**	13.49
Township	Dundee/Selkirk	**Maximum depth (m)**	25.0
Latitude	47°11’	**Mean depth (m)**	6.6
Longitude	80°39’	**Volume (x 10^4 m^3)**	813
Distance from Sudbury (km)	81	**Area (ha)**	129.71
Elevation (m)	357	**Road access**	No
Watershed code	2DC01		

Pilgrim Lake



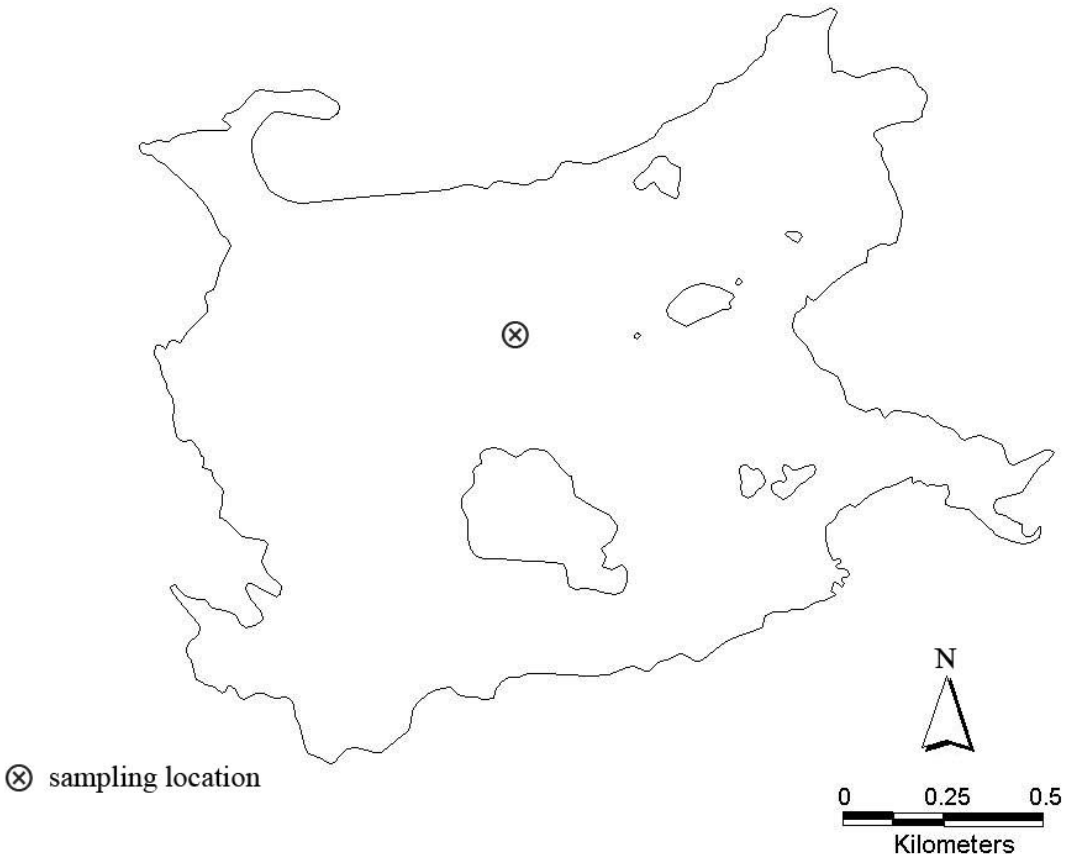
PILGRIM SES # 249

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	11.70 V	5.20 V	32.0 V	-0.26 V	2.20 V	0.700 V	0.600 V	0.350 V	0.30 V	9.5 V	N	2.2 V	0.550 V
7/25/1982	9.50 V	5.24 V	32.0 V	-0.14 V	N	N	N	N	N	10.9 V	N	2.1 V	N
7/12/1983	7.00 V	5.38 V	30.4 V	-0.12 V	2.30 V	0.620 V	0.650 V	0.320 V	0.24 V	9.5 V	N	5.7 V	0.670 V
7/24/1984	6.00 V	5.39 V	29.5 V	-0.07 V	2.29 V	0.650 V	0.660 V	0.300 V	0.25 V	9.3 V	6.0 V	N	0.770 V
7/30/1985	6.50 V	5.37 V	30.0 V	-0.53 V	1.52 V	0.630 V	0.670 V	0.270 V	O	8.7 V	5.5 V	N	0.770 V
7/21/1986	8.00 V	5.57 V	27.5 V	0.33 V	2.07 V	0.620 V	0.660 V	0.260 V	0.30 V	9.1 V	4.5 V	N	1.020 V
7/15/1987	7.40 V	5.82 V	26.5 V	0.24 V	2.10 V	0.580 V	0.740 V	0.270 V	0.25 V	7.3 V	2.0 T	N	0.720 V
7/13/1988	5.60 V	5.72 V	21.6 V	0.30 V	2.20 V	0.700 V	0.720 V	0.290 V	0.50 T	8.6 V	4.0 V	N	0.720 V
7/26/1989	6.50 V	5.52 V	26.7 V	-0.05 V	2.20 V	0.640 V	0.640 V	0.280 V	0.30 T	7.5 V	7.0 V	N	0.840 V
7/25/1990	6.10 V	5.48 V	26.0 V	0.04 V	1.90 V	0.600 V	0.740 V	0.280 V	0.20 T	8.2 V	7.0 V	N	0.700 V
7/09/1991	8.00 V	5.53 V	25.5 V	0.22 C	2.10 V	0.640 V	0.780 V	0.320 V	0.30 T	8.3 V	4.0 V	N	0.760 V
7/08/1992	6.50 V	5.65 V	23.7 V	0.40 C	2.10 V	0.640 V	0.700 V	0.280 V	0.30 T	8.8 V	4.0 V	N	0.760 V
7/06/1993	5.20 V	5.55 V	25.2 V	0.20 V	1.80 V	0.570 V	0.650 V	0.246 V	0.20 W	8.0 V	5.6 V	N	0.940 V
7/25/1994	7.50 V	5.56 V	25.0 V	0.21 V	2.00 V	0.590 V	0.670 V	0.252 V	0.20 W	8.1 V	4.0 V	N	0.880 V
7/12/1995	N	5.79 V	24.0 V	0.07 C	1.80 V	0.560 V	0.680 V	0.240 V	0.20 W	7.5 V	6.0 V	N	0.760 V
7/08/1996	N	5.64 V	23.0 V	0.94 C	1.80 V	0.560 V	0.680 V	0.240 V	0.20 W	7.5 V	5.4 V	N	0.680 V
7/07/1997	N	5.69 V	22.1 V	0.26 V	1.72 V	0.535 V	0.630 V	0.215 V	0.20 V	7.1 V	9.6 V	N	1.020 V
7/12/1998	N	5.87 V	28.1 V	0.64 V	1.55 V	0.520 V	0.700 V	0.280 V	0.20 W	O	N	N	0.800 V
7/13/1999	N	5.93 V	23.1 V	0.43 V	1.50 V	0.400 V	0.600 V	0.240 V	0.20 W	7.5 V	N	N	0.600 V
7/17/2000	N	5.96 V	22.2 V	0.42 V	1.65 V	0.540 V	0.700 V	0.250 V	0.20 W	6.5 V	N	N	0.580 V
7/02/2001	N	5.89 V	23.2 V	0.44 V	1.50 V	0.520 V	0.720 V	0.260 V	0.20 W	7.0 V	N	N	0.560 V
7/09/2002	N	5.60 V	21.8 V	0.33 V	1.54 V	0.500 V	0.675 V	0.240 V	0.26 V	6.8 V	N	N	0.540 V
7/24/2003	7.00 V	5.73 V	28.8 V	0.19 V	1.64 V	0.515 V	0.705 V	0.245 V	0.19 V	6.7 V	N	N	0.600 V
7/12/2004	11.00 V	5.63 V	19.8 V	0.24 V	1.62 V	0.505 V	0.695 V	0.230 V	0.23 V	6.6 V	N	N	0.940 V
7/07/2005	7.00 V	5.95 V	20.6 V	N	1.62 V	0.520 V	0.645 V	0.235 V	0.21 V	6.8 V	N	N	0.720 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0300 V	0.0520 V	0.0760 V	0.0010 L	0.0020 V	0.0050 V	0.0030 V	0.12 V	0.026 V	0.011 C	1.6 V	0.40 V
7/25/1982	O	0.0540 V	0.0620 V	0.0040 V	0.0040 V	0.0070 V	N	N	N	N	N	N
7/12/1983	0.0150 V	0.0430 V	0.0640 V	0.0030 V	0.0040 V	0.0060 V	N	N	N	N	N	N
7/24/1984	0.0550 V	0.0460 V	0.0480 V	0.0010 L	0.0020 V	0.0050 V	N	N	N	N	N	N
7/30/1985	0.0230 V	0.0370 V	0.0510 V	0.0020 V	0.0030 V	0.0080 V	N	N	N	N	N	N
7/21/1986	0.0300 V	0.0420 V	0.0420 V	0.0010 V	0.0030 V	0.0030 V	N	N	N	N	N	N
7/15/1987	0.0300 V	0.0280 V	0.0190 V	0.0010 V	0.0020 L	0.0040 V	N	N	N	N	N	N
7/13/1988	0.0230 T	0.0320 V	0.0400 T	0.0031 V	0.0030 T	0.0064 V	N	N	N	N	2.1 V	N
7/26/1989	0.0270 T	0.0360 V	0.0510 T	0.0008 T	0.0020 T	0.0032 V	N	N	N	N	2.2 V	N
7/25/1990	0.0700 T	0.0360 V	0.0500 T	0.0005 W	0.0030 T	0.0070 V	N	N	N	N	2.6 V	0.40 T
7/09/1991	0.0200 W	0.0380 V	0.0400 T	0.0010 T	0.0020 W	0.0050 V	0.0040 T	0.17 V	0.004 T	0.015 T	2.1 V	0.20 W
7/08/1992	0.0200 W	0.0350 V	0.0370 T	0.0005 W	0.0020 W	0.0040 V	0.0080 T	0.17 V	0.016 V	0.005 W	2.0 V	0.20 W
7/06/1993	0.0290 T	0.0390 V	0.0480 T	0.0010 T	0.0020 T	0.0037 V	0.0040 T	0.16 V	0.022 V	0.010 T	2.1 V	0.40 T
7/25/1994	0.0370 T	0.0440 V	0.0400 T	0.0014 T	0.0030 T	0.0045 V	0.0060 T	0.18 V	0.024 V	0.005 W	2.1 V	0.20 T
7/12/1995	0.0200 W	0.0360 V	0.0900 T	0.0016 V	0.0020 T	0.0070 V	0.0020 W	0.12 V	0.002 T	0.005 W	2.5 V	0.20 W
7/08/1996	0.0200 W	0.0340 V	0.0300 T	0.0008 T	0.0015 T	0.0025 V	0.0040 T	0.18 V	0.014 V	0.005 W	2.3 V	0.20 W
7/07/1997	0.0357 V	0.0393 V	0.0474 V	0.0008 D	0.0027 V	0.0036 V	0.0038 V*	0.18 V	0.021 V	0.010 V	2.6 V	0.30 V
7/12/1998	0.0120 V	0.0374 V	0.0265 V	0.0008 D	0.0023 V	0.0036 V	0.0040 T	0.18 V	0.010 V	0.005 W	2.5 V	0.80 T
7/13/1999	0.0122 V	0.0357 V	0.0147 V	0.0008 D	0.0021 V	0.0030 V	0.0040 T	0.12 V	0.002 W	0.015 T	2.5 V	0.20 W
7/17/2000	0.0146 V	0.0343 V	0.0224 V	0.0008 D	0.0019 V	0.0036 V	0.0040 T	0.16 V	0.008 T	0.005 W	2.4 V	0.20 W
7/02/2001	0.0200 V	0.0385 V	0.0260 V	0.0008 D	0.0024 V	0.0038 V	0.0040 T	0.16 V	0.010 V	0.006 T	2.4 V	0.80 T
7/09/2002	0.0051 V	0.0427 V	0.0291 V	0.0009 V	0.0025 V	0.0033 V	0.0041 V*	0.17 V	0.026 V	0.006 T	N	0.14 V
7/24/2003	0.0203 V	0.0390 V	0.0365 V	0.0008 D	0.0021 V	0.0047 V	0.0043 V*	0.16 V	0.022 V	0.002 W	2.9 V	0.36 V
7/12/2004	0.0239 V	0.0336 V	0.0409 V	0.0008 D	0.0015 D	0.0040 V	0.0035 V*	0.13 V	0.016 V	0.004 T	2.5 V	0.22 V
7/07/2005	0.0192 V	0.0375 V	0.0264 V	0.0016 V	0.0031 V	0.0043 V	0.0041 V*	0.16 V	0.004 T	0.004 T	2.4 V	0.18 V

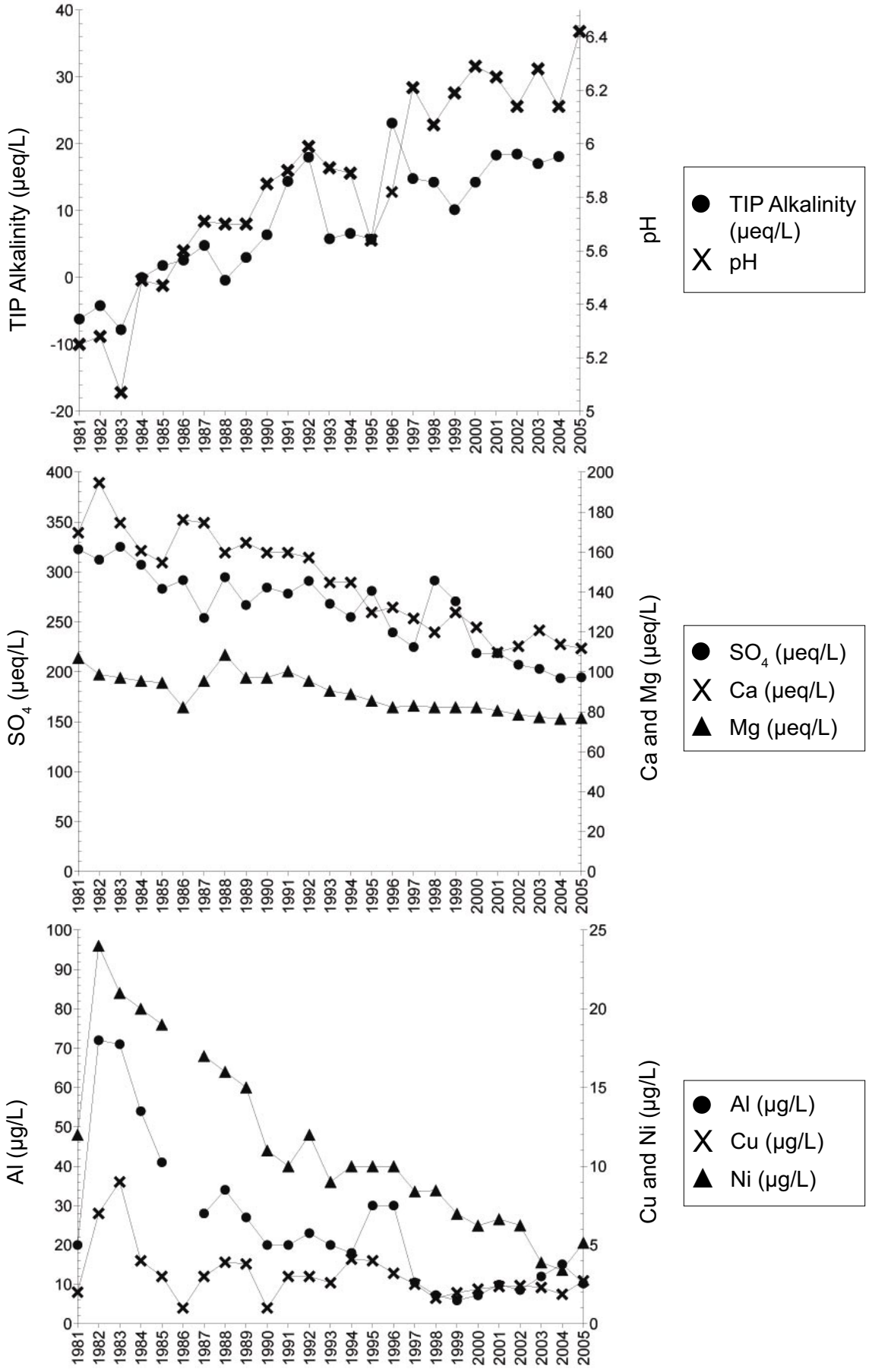
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Reef Lake



SES ID #	8	**Shoreline length (km)**	10.36
Township	Caen	**Maximum depth (m)**	33.5
Latitude	46°14’	**Mean depth (m)**	not available
Longitude	81°12’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	29	**Area (ha)**	213.96
Elevation (m)	241	**Road access**	No
Watershed code	2CF05		

Reef Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

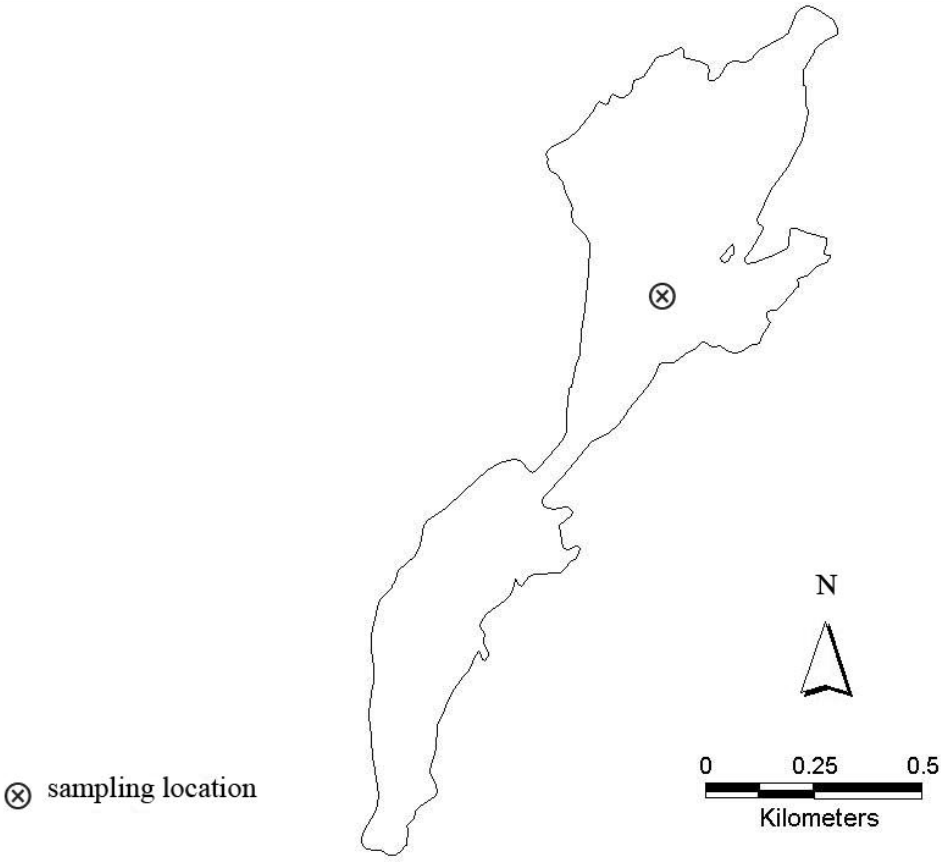
REEF SES # 8

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
6/15/1981	9.50 V	5.25 V	47.0 V	-0.31 V	3.40 V	1.300 V	1.000 V	0.550 V	0.55 V	15.5 V	N	V	0.150 V
7/06/1982	9.50 V	5.28 V	46.0 V	-0.21 V	3.90 V	1.200 V	N	N	N	15.0 V	N	3.8 V	N
8/01/1983	7.00 V	5.07 V	56.0 V	-0.39 V	3.50 V	1.180 V	1.200 V	O	0.84 V	15.6 V	N	4.9 V	0.040 V
7/18/1984	5.50 V	5.49 V	44.2 V	0.00 V	3.22 V	1.160 V	0.900 V	0.490 V	0.51 V	14.8 V	3.0 V	N	0.010 W
8/22/1985	12.00 V	5.47 V	41.5 V	0.09 V	3.10 V	1.150 V	1.050 V	0.580 V	0.31 V	13.6 V	2.5 V	N	0.020 T
7/14/1986	8.00 V	5.60 V	41.0 V	0.13 V	3.53 V	1.000 V	0.890 V	0.470 V	0.25 V	14.0 V	2.5 V	N	0.040 T
7/22/1987	11.00 V	5.71 V	40.5 V	0.24 V	3.50 V	1.160 V	0.920 V	0.490 V	0.35 V	12.2 V	2.0 T	N	0.020 V
7/11/1988	10.00 V	5.70 V	40.5 V	-0.02 V	3.20 V	1.320 V	0.960 V	0.530 V	0.40 T	14.2 V	1.0 T	N	0.080 T
7/17/1989	7.00 V	5.70 V	40.2 V	0.15 V	3.30 V	1.180 V	0.920 V	0.510 V	0.40 T	12.8 V	2.5 V	N	0.200 T
7/17/1990	9.50 V	5.85 V	40.1 V	0.32 V	3.20 V	1.180 V	0.960 V	0.520 V	0.30 T	13.7 V	2.0 T	N	0.080 T
7/11/1991	10.90 V	5.90 V	39.3 V	0.72 C	3.20 V	1.220 V	0.940 V	0.490 V	0.20 T	13.4 V	0.5 T	N	0.160 T
7/07/1992	8.50 V	5.99 V	39.1 V	0.90 C	3.15 V	1.160 V	0.950 V	0.460 V	0.40 T	14.0 V	2.5 V	N	0.180 V
7/14/1993	6.50 V	5.91 V	37.7 V	0.29 V	2.90 V	1.100 V	0.940 V	0.450 V	0.30 T	12.9 V	2.8 V	N	0.260 V
7/27/1994	8.50 V	5.89 V	36.7 V	0.33 V	2.90 V	1.080 V	0.910 V	0.450 V	0.20 T	12.2 V	2.0 V	N	0.040 T
7/10/1995	N	5.64 V	36.0 V	0.29 C	2.60 V	1.040 V	0.920 V	0.460 V	0.40 T	13.5 V	4.0 V	N	0.040 T
7/08/1996	N	5.82 V	36.0 V	1.16 C	2.65 V	1.000 V	0.940 V	0.450 V	0.40 T	11.5 V	3.6 V	N	0.160 V
7/15/1997	N	6.21 V	34.1 V	0.74 V	2.54 V	1.010 V	0.880 V	0.415 V	0.39 V	10.8 V	3.2 V	N	0.260 V
7/13/1998	N	6.07 V	33.0 V	0.71 V	2.40 V	1.000 V	1.000 V	0.440 V	0.40 T	14.0 V	N	N	0.120 V
7/13/1999	N	6.19 V	33.7 V	0.51 V	2.60 V	1.000 V	1.000 V	0.410 V	0.40 T	13.0 V	N	N	0.060 T
7/18/2000	N	6.29 V	33.2 V	0.71 V	2.45 V	1.000 V	0.920 V	0.430 V	0.40 T	10.5 V	N	N	0.040 T
7/03/2001	N	6.25 V	33.6 V	0.92 V	2.20 V	0.980 V	0.920 V	0.430 V	0.40 T	10.5 V	N	N	0.080 T
7/09/2002	N	6.14 V	31.3 V	0.92 V	2.26 V	0.955 V	0.925 V	0.375 V	0.47 V	10.0 V	N	N	0.060 T
7/16/2003	6.50 V	6.28 V	29.8 V	0.85 V	2.42 V	0.940 V	0.965 V	0.415 V	0.38 V	9.8 V	N	N	0.140 V
7/06/2004	6.20 V	6.14 V	29.6 V	0.90 V	2.28 V	0.930 V	0.885 V	0.410 V	0.41 V	9.3 V	N	N	0.180 V
7/04/2005	6.25 V	6.42 V	29.6 V	N	2.24 V	0.935 V	0.930 V	0.415 V	0.44 V	9.4 V	N	N	0.160 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
6/15/1981	0.0200 V	0.1920 V	0.0200 V	0.0020 V	0.0120 V	0.0030 V	0.0040 V	0.17 V	0.040 V	0.016 C	1.7 V	0.20 V
7/06/1982	O	0.1740 V	0.0720 V	0.0070 V	0.0240 V	0.0120 V	N	N	N	N	N	N
8/01/1983	0.0300 V	0.1400 V	0.0710 V	0.0090 V	0.0210 V	O	N	N	N	N	N	N
7/18/1984	0.0300 T	0.1130 V	0.0540 V	0.0040 V	0.0200 V	0.0140 V	N	N	N	N	N	N
8/22/1985	0.0170 V	0.0820 V	0.0410 V	0.0030 V	0.0190 V	0.0100 V	N	N	N	N	N	N
7/14/1986	0.0040 L	0.0680 V	O	0.0010 V	O	0.0020 V	N	N	N	N	N	N
7/22/1987	0.0240 V	0.0610 V	0.0280 V	0.0030 V	0.0170 V	0.0010 V	N	N	N	N	N	N
7/11/1988	0.0200 W	0.0560 V	0.0340 T	0.0039 V	0.0160 V	0.0087 V	N	N	N	N	1.5 V	N
7/17/1989	0.0200 W	0.0530 V	0.0270 T	0.0038 V	0.0150 V	0.0069 V	N	N	N	N	1.6 V	N
7/17/1990	0.0300 T	0.0530 V	0.0200 T	0.0010 T	0.0110 V	0.0060 V	N	N	N	N	1.8 V	0.60 T
7/11/1991	0.0200 W	0.0400 V	0.0200 T	0.0030 V	0.0100 T	0.0060 V	0.0020 T	0.19 V	0.020 V	0.005 W	1.7 V	0.20 W
7/07/1992	0.0220 T	0.0470 V	0.0230 T	0.0030 V	0.0120 V	0.0070 V	0.0060 T	0.16 V	0.012 V	0.005 W	2.3 V	0.20 T
7/14/1993	0.0200 W	0.0300 V	0.0200 T	0.0026 V	0.0090 T	0.0037 V	0.0040 T	0.18 V	0.010 V	0.010 T	2.1 V	0.20 T
7/27/1994	0.0200 W	0.0380 V	0.0180 T	0.0041 V	0.0100 T	0.0054 V	0.0040 T	0.16 V	0.034 V	O	1.9 V	0.20 T
7/10/1995	0.0200 W	0.0380 V	0.0300 T	0.0040 V	0.0100 V	0.0055 V	0.0020 W	0.22 V	0.002 W	0.005 W	2.1 V	0.20 T
7/08/1996	0.0200 W	0.0430 V	0.0300 T	0.0032 V	0.0100 V	0.0050 V	0.0040 T	0.20 V	0.012 V	0.005 W	2.1 V	0.20 W
7/15/1997	0.0041 V	0.0369 V	0.0105 V	0.0025 V	0.0084 V	0.0036 V	0.0035 V*	0.22 V	0.014 V	0.008 T	1.9 V	0.26 V
7/13/1998	0.0035 V	0.0156 V	0.0073 V	0.0016 V	0.0085 V	0.0035 V	0.0040 T	0.18 V	0.002 W	0.005 W	2.1 V	0.20 W
7/13/1999	0.0036 V	0.0089 V	0.0059 V	0.0020 V	0.0070 V	0.0030 V	0.0040 T	0.14 V	0.002 W	0.010 T	2.3 V	0.40 T
7/18/2000	0.0035 V	0.0068 V	0.0072 V	0.0022 V	0.0062 V	0.0032 V	0.0040 T	0.20 V	N	0.005 W	2.2 V	0.20 W
7/03/2001	0.0061 V	0.0157 V	0.0099 V	0.0024 V	0.0066 V	0.0022 V	0.0040 T	0.16 V	0.008 T	0.005 W	2.5 V	O
7/09/2002	0.0024 V	0.0290 V	0.0086 V	0.0024 V	0.0063 V	0.0025 V	0.0059 V*	0.19 V	0.028 V	0.008 T	N	0.28 V
7/16/2003	0.0077 V	0.0079 V	0.0120 V	0.0023 V	0.0039 V	0.0113 V	0.0047 V*	0.18 V	0.026 V	0.006 T	2.8 V	0.38 V
7/06/2004	0.0072 V	0.0124 V	0.0151 V	0.0019 V	0.0034 V	0.0022 V	0.0042 V*	0.10 V	0.004 T	0.004 T	2.7 V	0.52 V
7/04/2005	0.0110 V	0.0090 V	0.0102 V	0.0027 V	0.0052 V	0.0027 V	0.0040 V*	0.35 V	N	N	2.3 V	0.58 V

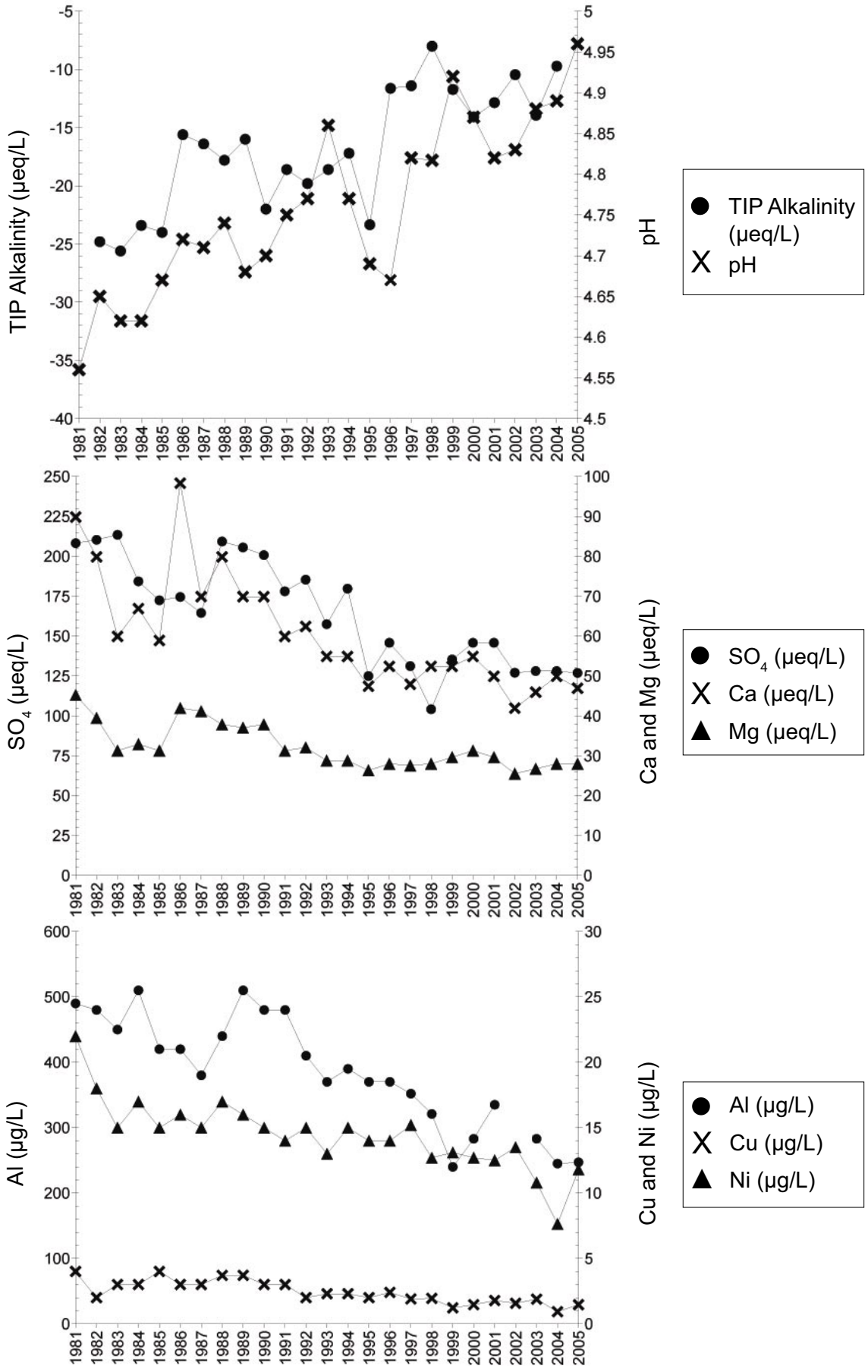
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Ruth Roy Lake



SES ID #	216	**Shoreline length (km)**	6.05
Township	Carlyle	**Maximum depth (m)**	18.0
Latitude	46°05’	**Mean depth (m)**	4.1
Longitude	81°14’	**Volume (x 10^4 m^3)**	189
Distance from Sudbury (km)	46	**Area (ha)**	54.46
Elevation (m)	214	**Road access**	No
Watershed code	2CF03		

Ruth Roy Lake



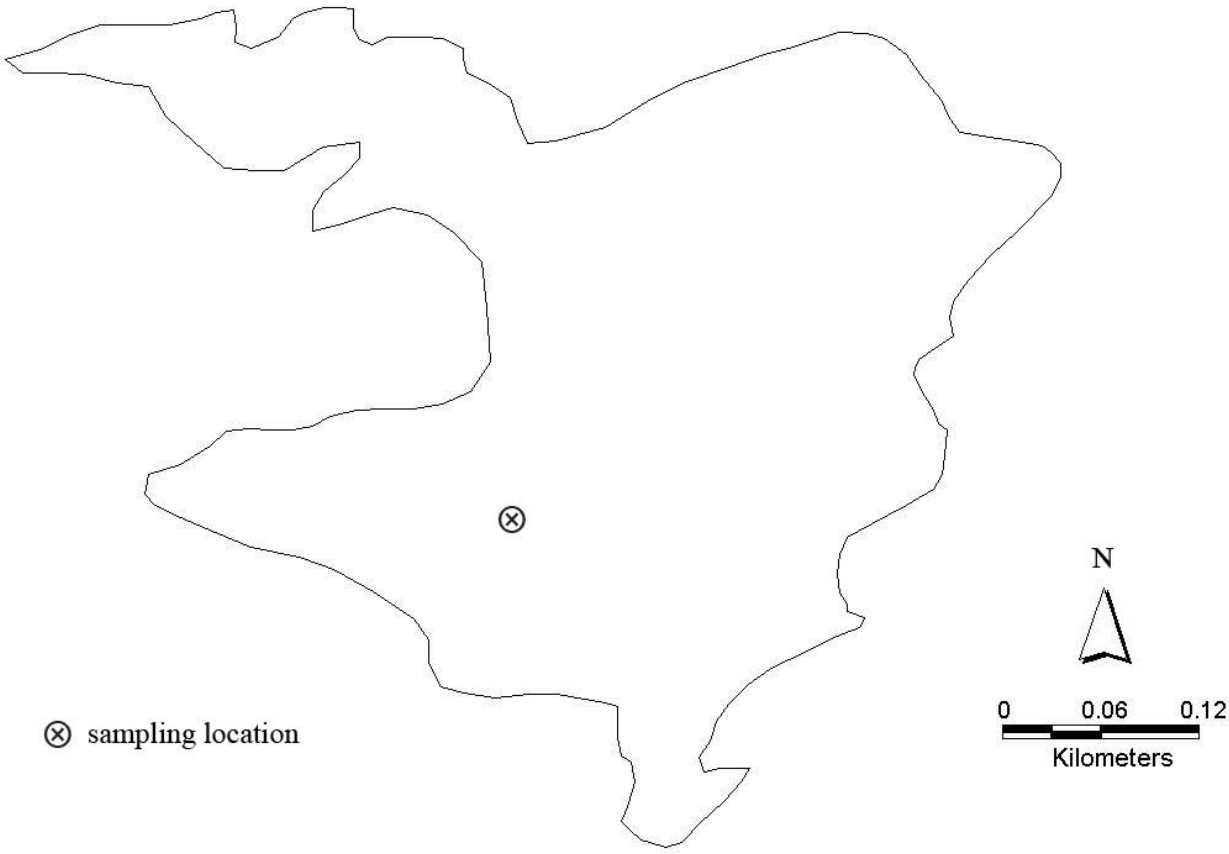
RUTH-ROY SES # 216

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/14/1981	7.80 V	4.56 V	33.0 V	O	1.80 V	0.550 V	O	O	0.55 V	10.0 V	N	-0.9 T	0.200 V
7/27/1982	10.50 V	4.65 V	33.0 V	-1.24 V	1.60 V	0.480 V	N	N	N	10.1 V	N	1.6 V	N
8/01/1983	6.00 V	4.62 V	32.7 V	-1.28 V	1.20 V	0.380 V	0.600 V	0.360 V	0.52 V	10.3 V	N	5.6 V	0.550 V
8/01/1984	12.50 V	4.62 V	33.5 V	-1.17 V	1.34 V	0.400 V	0.460 V	0.170 V	1.20 V	8.9 V	1.0 V	N	O
7/30/1985	10.00 V	4.67 V	33.0 V	-1.20 V	1.18 V	0.380 V	0.470 V	0.200 V	0.18 T	8.3 V	1.0 T	N	0.510 V
7/08/1986	8.50 V	4.72 V	30.0 V	-0.78 V	1.97 V	0.510 V	0.430 V	0.180 V	O	8.4 V	1.0 T	N	0.740 V
7/23/1987	11.50 V	4.71 V	31.0 V	-0.82 V	1.40 V	0.500 V	0.500 V	0.160 V	0.35 V	7.9 V	0.5 T	N	0.440 V
6/27/1988	11.00 V	4.74 V	32.8 V	-0.89 V	1.60 V	0.460 V	0.480 V	0.220 V	1.00 V	10.1 V	2.0 T	N	0.820 V
7/05/1989	12.50 V	4.68 V	33.0 V	-0.80 V	1.40 V	0.450 V	0.500 V	0.220 V	0.50 T	9.9 V	2.0 T	N	1.000 V
7/05/1990	11.00 V	4.70 V	32.5 V	-1.10 V	1.40 V	0.460 V	0.560 V	0.230 V	0.40 T	9.6 V	2.0 T	N	0.700 V
7/11/1991	11.40 V	4.75 V	29.4 V	-0.93 C	1.20 V	0.380 V	0.480 V	0.210 V	0.20 T	8.6 V	2.0 V	N	0.640 V
7/07/1992	11.50 V	4.77 V	29.0 V	-0.99 C	1.25 V	0.390 V	0.480 V	0.200 V	0.40 T	8.9 V	2.0 V	N	0.900 V
7/21/1993	11.20 V	4.86 V	27.2 V	-0.93 V	1.10 V	0.350 V	0.450 V	0.190 V	0.20 T	7.6 V	1.8 V	N	0.940 V
7/12/1994	11.40 V	4.77 V	26.5 V	-0.86 V	1.10 V	0.350 V	0.440 V	0.187 V	0.30 T	8.6 V	0.8 T	N	0.700 V
7/04/1995	N	4.69 V	23.2 V	-1.17 C	0.95 V	0.320 V	0.440 V	0.190 V	0.40 T	6.0 V	3.0 V	N	0.860 V
7/03/1996	N	4.67 V	23.0 V	-0.58 C	1.05 V	0.340 V	0.480 V	0.220 V	O	7.0 V	3.0 V	N	0.980 V
7/15/1997	N	4.82 V	23.2 V	-0.57 V	0.96 V	0.335 V	0.410 V	0.175 V	0.31 V	6.3 V	2.4 V	N	0.960 V
7/07/1998	N	4.82 V	23.2 V	-0.40 V	1.05 V	0.340 V	0.440 V	0.190 V	0.40 T	5.0 V	N	N	0.880 V
7/05/1999	N	4.92 V	24.7 V	-0.59 V	1.05 V	0.360 V	0.500 V	0.210 V	0.40 T	6.5 V	N	N	0.920 V
7/05/2000	N	4.87 V	25.7 V	-0.70 V	1.10 V	0.380 V	0.520 V	0.220 V	0.60 T	7.0 V	N	N	0.760 V
7/03/2001	N	4.82 V	21.9 V	-0.64 V	1.00 V	0.360 V	0.520 V	0.240 V	0.40 T	7.0 V	N	N	0.880 V
7/08/2002	N	4.83 V	22.2 V	-0.52 V	0.84 V	0.310 V	0.470 V	0.175 V	0.38 V	6.1 V	N	N	0.800 V
7/14/2003	7.50 V	4.88 V	19.4 V	-0.70 V	0.92 V	0.325 V	0.515 V	0.210 V	0.01 W	6.2 V	N	N	0.700 V
7/05/2004	14.90 V	4.89 V	20.4 V	-0.49 V	1.00 V	0.340 V	0.480 V	0.200 V	0.37 V	6.2 V	N	N	0.980 V
7/12/2005	12.50 V	4.96 V	21.8 V	N	0.94 V	0.340 V	0.460 V	0.205 V	0.39 V	6.1 V	0.2 W	N	0.900 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/14/1981	0.0300 V	0.1080 V	0.4900 V	0.0040 V	0.0220 V	0.0310 V	O	0.35 V	0.052 V	0.051 C	0.7 V	0.60 V
7/27/1982	0.0400 T	0.1110 V	0.4800 V	0.0020 V	0.0180 V	0.0240 V	N	N	N	N	N	N
8/01/1983	0.0600 V	0.0920 V	0.4500 V	0.0030 V	0.0150 V	0.0310 V	N	N	N	N	N	N
8/01/1984	0.0550 V	0.0940 V	0.5100 V	0.0030 V	0.0170 V	0.0220 V	N	N	N	N	N	N
7/30/1985	0.0490 V	0.0830 V	0.4200 V	0.0040 V	0.0150 V	0.0210 V	N	N	N	N	N	N
7/08/1986	0.0580 V	0.0930 V	0.4200 V	0.0030 V	0.0160 V	0.0220 V	N	N	N	N	N	N
7/23/1987	O	0.1000 V	0.3800 V	0.0030 V	0.0150 V	O	N	N	N	N	N	N
6/27/1988	0.0840 T	0.1100 V	0.4400 V	0.0037 V	0.0170 V	0.0280 V	N	N	N	N	0.9 V	N
7/05/1989	0.0680 T	0.0970 V	0.5100 V	0.0037 V	0.0160 V	0.0220 V	N	N	N	N	1.2 V	N
7/05/1990	0.0500 T	0.0910 V	0.4800 V	0.0030 V	0.0150 V	0.0170 V	0.0030 T	0.09 T	0.014 V	0.050 V	1.0 V	0.20 W
7/11/1991	0.0500 T	0.0850 V	0.4800 V	0.0030 V	0.0140 V	0.0200 V	0.0020 T	0.13 V	0.030 V	0.030 V	1.5 V	0.20 T
7/07/1992	0.0820 T	0.0820 V	0.4100 V	0.0020 T	0.0150 V	0.0190 V	0.0020 W	0.11 V	0.052 V	0.040 V	0.9 V	0.20 W
7/21/1993	0.0820 T	0.0770 V	0.3700 V	0.0023 T	0.0130 V	0.0170 V	0.0060 T	0.12 V	0.046 V	0.045 V	2.0 V	0.20 T
7/12/1994	0.0640 T	0.0800 V	0.3900 V	0.0023 T	0.0150 V	0.0200 V	0.0040 T	0.12 V	0.058 V	0.090 V	0.5 V	0.20 W
7/04/1995	0.0600 T	0.0740 V	0.3700 V	0.0020 V	0.0140 V	0.0180 V	0.0080 T	0.10 V	0.006 T	0.060 V	0.8 V	0.20 W
7/03/1996	0.0800 T	0.0720 V	0.3700 V	0.0024 V	0.0140 V	0.0190 V	0.0020 W	0.18 V	0.062 V	0.040 V	0.8 V	0.20 W
7/15/1997	0.0736 V	0.0771 V	0.3520 V	0.0019 V	0.0152 V	0.0184 V	0.0024 V*	0.22 V	0.061 V	0.064 V	0.6 V	0.22 V
7/07/1998	0.0759 V	0.0766 V	0.3210 V	0.0019 V	0.0127 V	0.0158 V	0.0020 W	0.10 V	0.022 V	0.040 V	0.7 V	0.20 W
7/05/1999	0.0799 V	0.0789 V	0.2400 V	0.0012 V	0.0131 V	0.0154 V	0.0020 W	0.16 V	0.084 V	0.055 V	0.2 T	0.20 W
7/05/2000	0.0368 V	0.0794 V	0.2830 V	0.0015 V	0.0127 V	0.0170 V	0.0040 T	0.12 V	0.054 V	0.093 V	0.5 V	0.20 W
7/03/2001	0.0574 V	0.0640 V	0.3350 V	0.0018 V	0.0125 V	0.0161 V	0.0040 T	0.16 V	0.028 V	0.085 V	1.9 V	0.40 T
7/08/2002	0.0430 V	0.0603 V	O	0.0016 V	0.0135 V	0.0149 V	0.0017 V*	0.17 V	0.048 V	0.056 V	N	0.24 V
7/14/2003	0.0343 V	0.0599 V	0.2830 V	0.0019 V	0.0108 V	0.0150 V	0.0030 V*	0.13 V	0.046 V	0.040 V	1.4 V	0.24 V
7/05/2004	0.0367 V	0.0491 V	0.2450 V	0.0009 V	0.0076 V	0.0116 V	0.0023 V*	0.06 V	0.040 V	0.056 V	0.7 V	0.52 V
7/12/2005	0.0803 V	0.0639 V	0.2470 V	0.0015 V	0.0118 V	0.0174 V	0.0014 V*	0.08 V	0.026 V	0.042 V	0.1 W	0.14 V

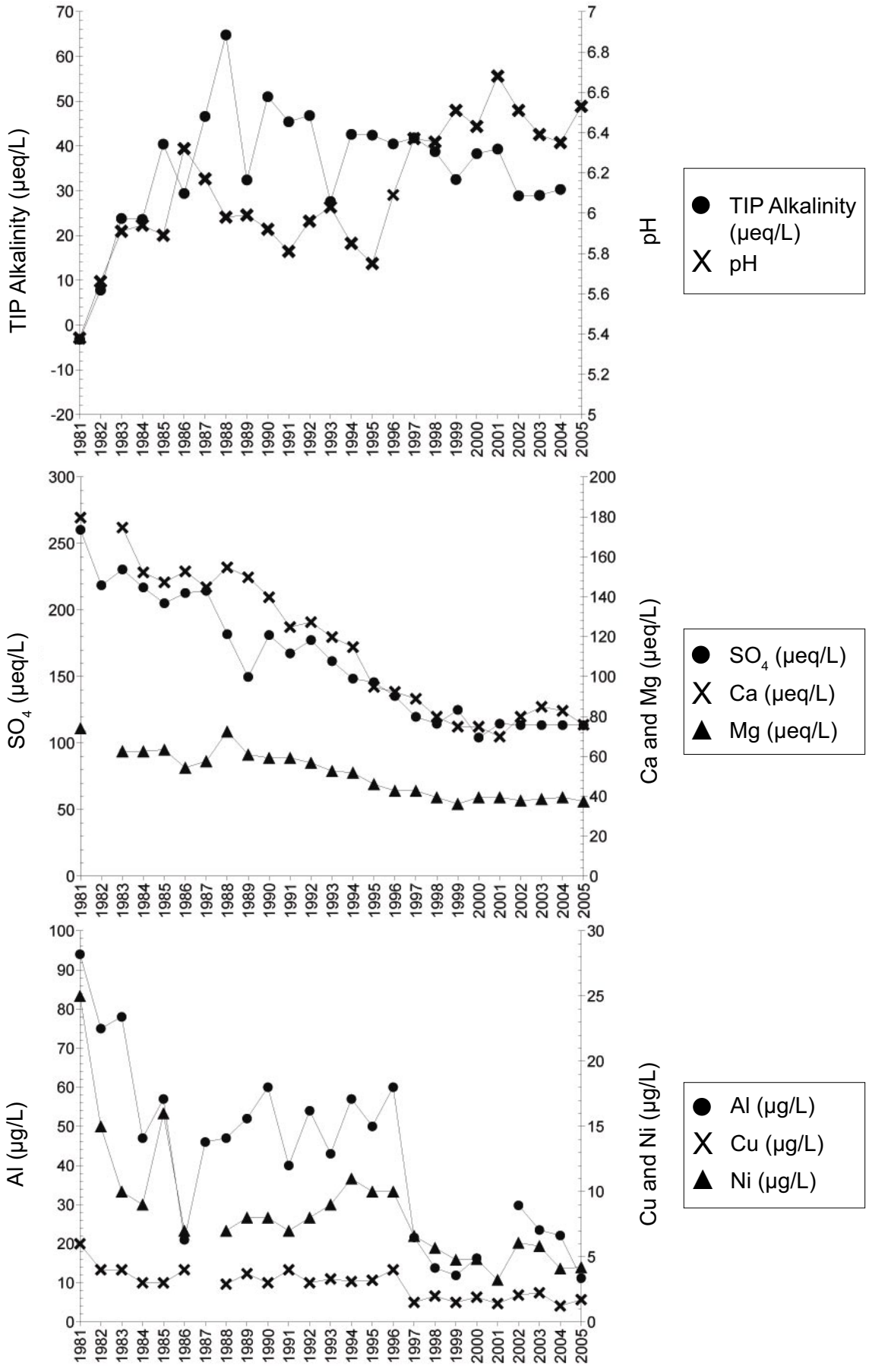
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Sans Chambre Lake



SES ID #	217	**Shoreline length (km)**	2.56
Township	Bowell	**Maximum depth (m)**	15.0
Latitude	46°43’	**Mean depth (m)**	5.6
Longitude	81°07’	**Volume (x 10^4 m^3)**	83
Distance from Sudbury (km)	30	**Area (ha)**	14.54
Elevation (m)	385	**Road access**	Yes
Watershed code	2CF13		

Sans Chambre Lake



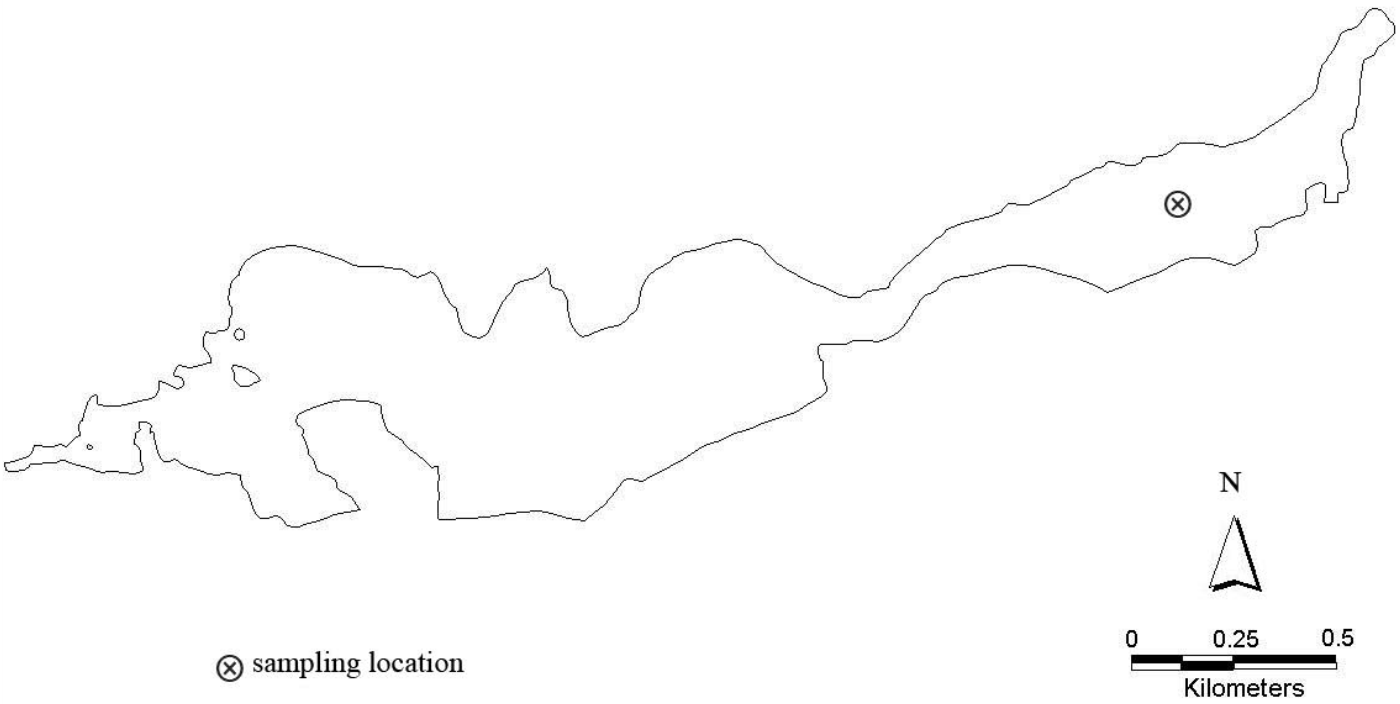
SANS CHAMBRE SES # 217

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/18/1981	5.00 V	5.38 V	40.0 V	-0.16 V	3.60 V	0.900 V	1.000 V	O	0.55 V	12.5 V	N	4.5 V	0.550 V
7/29/1982	5.00 V	5.66 V	40.0 V	0.39 V	N	N	N	N	N	10.5 V	N	4.4 V	N
8/11/1983	8.00 V	5.91 V	38.4 V	1.19 V	3.50 V	0.760 V	0.750 V	0.400 V	0.31 V	11.1 V	N	5.4 V	1.220 V
8/02/1984	8.00 V	5.94 V	36.0 V	1.18 V	3.05 V	0.760 V	0.840 V	0.390 V	0.30 V	10.4 V	7.0 V	N	1.270 V
7/08/1985	8.00 V	5.89 V	35.0 V	2.02 V	2.95 V	0.770 V	0.600 V	0.450 V	0.40 V	9.9 V	7.5 V	N	1.390 V
7/21/1986	9.80 V	6.32 V	32.0 V	1.47 V	3.06 V	0.660 V	0.780 V	0.380 V	0.35 V	10.2 V	4.0 V	N	1.020 V
7/13/1987	7.20 V	6.17 V	O	2.33 V	2.90 V	0.700 V	0.920 V	0.440 V	0.35 V	10.3 V	5.0 V	N	1.040 V
7/18/1988	8.50 V	5.98 V	33.2 V	3.24 V	3.10 V	0.880 V	0.880 V	0.400 V	0.10 V	8.7 V	9.5 V	N	1.360 V
7/24/1989	5.80 V	5.99 V	31.2 V	1.62 V	3.00 V	0.740 V	0.860 V	0.390 V	0.40 T	7.2 V	7.0 V	N	1.500 V
7/03/1990	5.00 V	5.92 V	32.4 V	2.55 V	2.80 V	0.720 V	0.780 V	0.420 V	O	8.7 V	10.5 V	N	1.420 V
7/02/1991	6.70 V	5.81 V	29.4 V	2.27 C	2.50 V	0.720 V	0.960 V	0.410 V	0.20 W	8.0 V	8.5 V	N	1.220 V
6/30/1992	5.80 V	5.96 V	29.2 V	2.34 C	2.55 V	0.690 V	0.850 V	0.380 V	0.40 T	8.5 V	13.0 V	N	1.240 V
7/13/1993	6.40 V	6.03 V	27.1 V	1.38 V	2.40 V	0.640 V	0.860 V	0.382 V	0.20 T	7.8 V	7.8 V	N	1.380 V
7/07/1994	6.00 V	5.85 V	27.2 V	2.13 V	2.30 V	0.630 V	0.790 V	0.378 V	0.20 T	7.1 V	12.8 V	N	1.180 V
7/06/1995	4.90 V	5.75 V	26.4 V	2.12 C	1.90 V	0.560 V	0.840 V	0.420 V	0.40 T	7.0 V	12.0 V	N	0.880 V
7/22/1996	4.40 V	6.09 V	24.0 V	2.02 C	1.85 V	0.520 V	0.800 V	0.440 V	0.40 T	6.5 V	11.0 V	N	0.840 V
7/22/1997	4.50 V	6.37 V	22.4 V	2.09 V	1.78 V	0.520 V	0.710 V	0.420 V	0.25 V	5.8 V	12.8 V	N	1.040 V
7/28/1998	4.00 V	6.35 V	21.0 V	1.94 V	1.60 V	0.480 V	0.720 V	0.450 V	0.40 T	5.5 V	N	N	0.840 V
7/12/1999	N	6.51 V	21.4 V	1.63 V	1.50 V	0.440 V	0.700 V	0.400 V	0.40 T	6.0 V	N	N	0.660 V
7/04/2000	5.30 V	6.43 V	20.5 V	1.91 V	1.50 V	0.480 V	0.740 V	0.390 V	0.40 T	5.0 V	N	N	0.840 V
7/23/2001	6.00 V	6.68 V	23.3 V	1.97 V	1.40 V	0.480 V	0.780 V	0.400 V	0.40 T	5.5 V	N	N	0.760 V
6/25/2002	4.50 V	6.51 V	20.6 V	1.44 V	1.60 V	0.460 V	0.770 V	0.335 V	0.38 V	5.5 V	N	N	1.040 V
7/14/2003	4.80 V	6.39 V	16.8 V	1.45 V	1.70 V	0.470 V	0.805 V	0.350 V	O	5.5 V	N	N	0.680 V
6/29/2004	6.20 V	6.35 V	18.8 V	1.51 V	1.66 V	0.480 V	0.740 V	0.325 V	0.26 V	5.5 V	N	N	1.100 V
7/26/2005	7.00 V	6.53 V	19.0 V	N	1.52 V	0.455 V	0.710 V	0.320 V	0.28 V	5.5 V	N	N	0.940 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/18/1981	0.1900 V	0.0840 V	0.0940 V	0.0060 V	0.0250 V	0.0180 V	O	0.27 V	0.056 V	0.011 C	1.8 V	0.40 V
7/29/1982	0.1450 V	0.0700 V	0.0750 V	0.0040 V	0.0150 V	0.0190 V	N	N	N	N	N	N
8/11/1983	0.1550 V	0.0550 V	0.0780 V	0.0040 V	0.0100 V	0.0050 V	N	N	N	N	N	N
8/02/1984	0.1250 V	0.0480 V	0.0470 V	0.0030 V	0.0090 V	0.0080 V	N	N	N	N	N	N
7/08/1985	0.2000 V	0.0680 V	0.0570 V	0.0030 V	0.0160 V	0.0120 V	0.0120 V	0.30 V	0.060 V	0.030 T	O	O
7/21/1986	O	0.0290 V	0.0210 V	0.0040 V	0.0070 V	0.0110 V	N	N	N	N	N	N
7/13/1987	0.1500 V	0.0680 V	0.0460 V	O	O	0.0170 V	N	N	N	N	N	N
7/18/1988	0.5300 V	0.0650 V	0.0470 T	0.0029 V	0.0070 T	0.0035 V	0.0100 V	0.28 V	0.062 V	0.020 W	2.0 V	1.20 V
7/24/1989	0.0850 T	0.0390 V	0.0520 T	0.0037 V	0.0080 T	0.0057 V	0.0050 T	0.20 V	0.044 V	0.010 T	1.8 V	0.80 T
7/03/1990	0.4400 V	0.0480 V	0.0600 T	0.0030 V	0.0080 T	0.0060 V	0.0340 V	0.50 V	0.020 V	0.005 W	2.2 V	1.60 V
7/02/1991	0.0800 T	0.0420 V	0.0400 T	0.0040 V	0.0070 T	0.0070 V	0.0110 V	0.22 V	0.016 V	0.005 T	2.3 V	0.80 T
6/30/1992	0.5200 V	0.0400 V	0.0540 T	0.0030 V	0.0080 T	0.0050 V	0.0070 T	0.24 V	0.032 V	0.005 W	2.2 V	1.40 V
7/13/1993	0.0690 T	0.0320 V	0.0430 T	0.0033 V	0.0090 T	0.0052 V	0.0060 T	0.24 V	0.018 V	0.005 T	2.2 V	1.00 V
7/07/1994	0.2700 V	0.0750 V	0.0570 T	0.0031 V	0.0110 V	0.0062 V	0.0060 T	0.24 V	0.098 V	0.020 T	2.5 V	1.20 V
7/06/1995	0.2200 V	0.0600 V	0.0500 T	0.0032 V	0.0100 V	O	0.0160 V	0.28 V	0.018 V	0.005 T	3.1 V	1.60 V
7/22/1996	0.1400 V	0.0530 V	0.0600 T	0.0040 V	0.0100 V	0.0100 V	0.0080 T	0.30 V	0.046 V	0.005 W	2.9 V	0.20 W
7/22/1997	0.1180 V	0.0447 V	0.0216 V	0.0015 V	0.0066 V	0.0062 V	0.0068 V*	0.30 V	0.027 V	0.012 V	3.0 V	1.00 V
7/28/1998	0.0613 V	0.0260 V	0.0138 V	0.0020 V	0.0057 V	0.0019 V	0.0060 T	0.28 V	0.006 T	0.005 W	3.1 V	0.60 T
7/12/1999	0.0467 V	0.0273 V	0.0119 V	0.0015 V	0.0048 V	0.0019 V	0.0060 T	0.22 V	0.008 T	0.015 T	3.1 V	0.80 T
7/04/2000	0.0656 V	0.0241 V	0.0163 V	0.0019 V	0.0048 V	0.0023 V	0.0040 T	0.20 V	0.018 V	0.013 T	3.0 V	0.40 T
7/23/2001	O	O	O	0.0014 V	0.0032 V	0.0010 V	0.0060 T	0.32 V	0.004 T	0.005 W	2.5 V	0.40 T
6/25/2002	0.0614 V	0.0302 V	0.0298 V	0.0021 V	0.0061 V	0.0043 V	0.0062 V*	0.21 V	0.046 V	0.016 V	2.6 V	0.46 V
7/14/2003	0.0615 V	0.0255 V	0.0235 V	0.0022 V	0.0058 V	0.0070 V	0.0055 V*	0.20 V	0.040 V	0.006 T	2.8 V	0.52 V
6/29/2004	0.0413 V	0.0179 V	0.0221 V	0.0012 V	0.0041 V	0.0034 V	0.0041 V*	0.11 V	0.016 V	0.008 T	2.7 V	0.54 V
7/26/2005	0.0428 V	0.0215 V	0.0112 V	0.0017 V	0.0042 V	0.0021 V	0.0037 V*	0.18 V	0.010 V	0.002 W	2.7 V	0.40 V

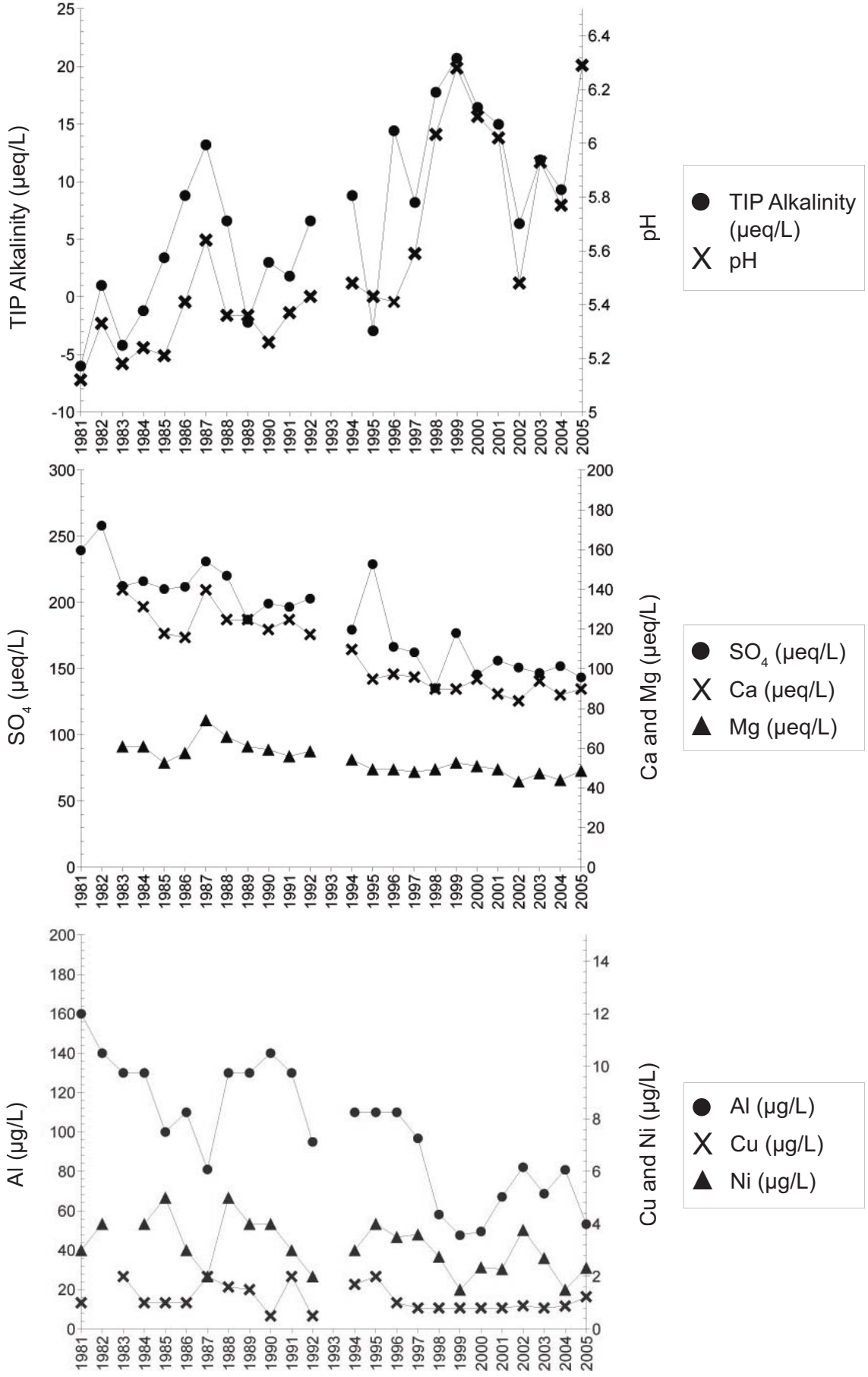
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Seagram Lake



SES ID #	244	**Shoreline length (km)**	9.90
Township	Seagram	**Maximum depth (m)**	19.0
Latitude	47°06’	**Mean depth (m)**	7.2
Longitude	80°32’	**Volume (x 10^4 m^3)**	735
Distance from Sudbury (km)	76	**Area (ha)**	104.22
Elevation (m)	309	**Road access**	No
Watershed code	2DC09		

Seagram Lake



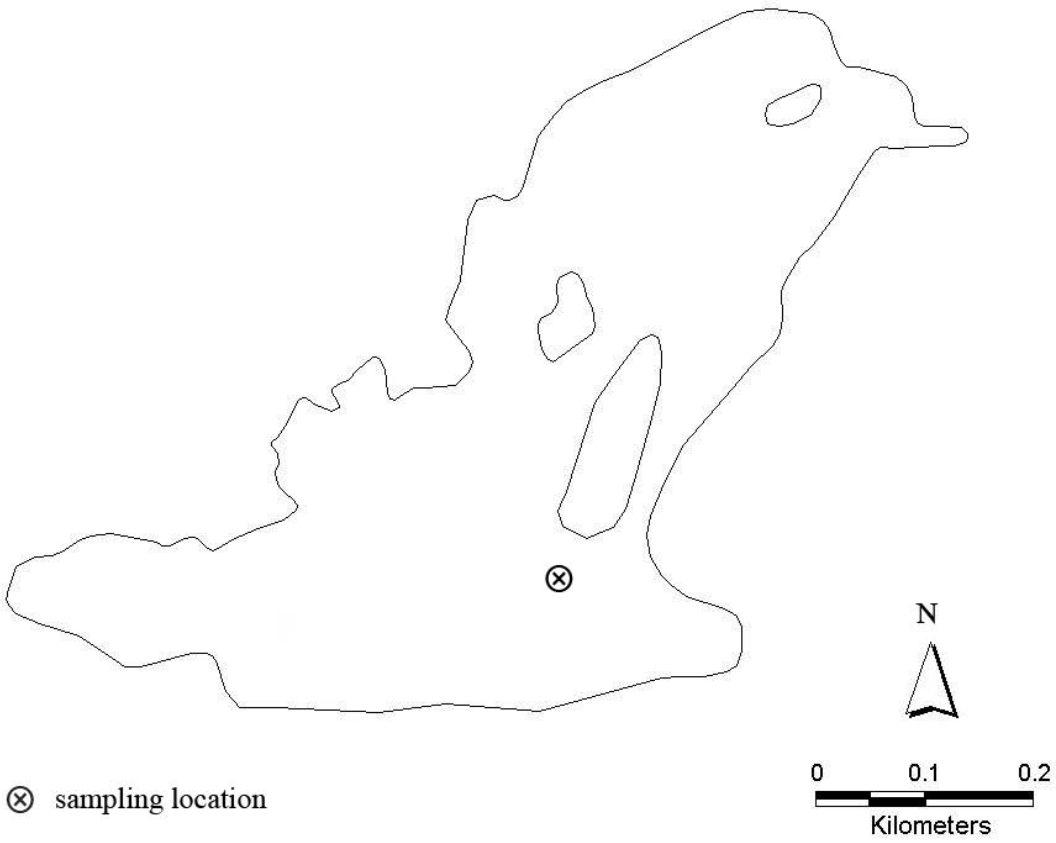
SEAGRAM SES # 244

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/07/1981	5.90 V	5.12 V	36.0 V	-0.30 V	N	N	0.800 V	0.450 V	0.40 V	11.5 V	N	7.6 V	1.800 V
7/24/1982	6.00 V	5.33 V	47.0 V	0.05 V	N	N	N	N	N	12.4 V	N	11.2 V	N
8/02/1983	7.00 V	5.18 V	36.5 V	-0.21 V	2.80 V	0.740 V	0.700 V	0.400 V	0.20 V	10.2 V	N	8.9 V	1.800 V
7/25/1984	5.00 V	5.24 V	33.5 V	-0.06 V	2.63 V	0.740 V	0.720 V	0.350 V	0.19 V	10.4 V	11.5 V	N	1.580 V
8/20/1985	3.50 V	5.21 V	33.0 V	0.17 V	2.36 V	0.640 V	0.650 V	0.400 V	0.14 T	10.1 V	13.0 V	N	1.530 V
7/21/1986	4.00 V	5.41 V	31.0 V	0.44 V	2.32 V	0.700 V	0.690 V	0.350 V	0.30 V	10.2 V	9.5 V	N	1.760 V
7/15/1987	7.50 V	5.64 V	32.0 V	0.66 V	2.80 V	0.900 V	0.800 V	0.320 V	0.25 V	11.1 V	7.5 V	N	1.760 V
7/21/1988	7.30 V	5.36 V	32.4 V	0.33 V	2.50 V	0.800 V	0.780 V	0.400 V	O	10.6 V	10.0 V	N	1.600 V
7/26/1989	5.50 V	5.36 V	31.9 V	-0.11 V	2.50 V	0.740 V	0.720 V	0.430 V	0.30 T	9.0 V	10.0 V	N	1.900 V
7/25/1990	5.50 V	5.26 V	31.4 V	0.15 V	2.40 V	0.720 V	0.820 V	0.440 V	0.40 T	9.6 V	14.0 V	N	1.800 V
7/09/1991	6.50 V	5.37 V	29.7 V	0.09 C	2.50 V	0.680 V	0.780 V	0.420 V	0.20 T	9.5 V	8.0 V	N	1.700 V
7/08/1992	6.50 V	5.43 V	29.5 V	0.33 C	2.35 V	0.710 V	0.790 V	0.440 V	0.30 T	9.8 V	9.5 V	N	1.640 V
6/06/1993	N	N	35.7 V	N	N	N	N	N	N	N	N	N	N
7/25/1994	4.25 V	5.48 V	27.9 V	0.44 V	2.20 V	0.660 V	0.700 V	0.374 V	0.20 W	8.6 V	8.2 V	N	1.640 V
7/10/1995	N	5.43 V	26.0 V	-0.15 C	1.90 V	0.600 V	0.680 V	0.320 V	0.20 W	11.0 V	10.4 V	N	1.540 V
7/08/1996	N	5.41 V	26.0 V	0.72 C	1.95 V	0.600 V	0.680 V	0.300 V	0.40 T	8.0 V	10.8 V	N	1.560 V
7/07/1997	N	5.59 V	24.2 V	0.41 V	1.92 V	0.585 V	0.650 V	0.260 V	0.16 V	7.8 V	15.8 V	N	1.700 V
7/12/1998	N	6.03 V	22.3 V	0.89 V	1.80 V	0.600 V	0.720 V	0.350 V	0.20 W	6.5 V	N	N	1.460 V
7/13/1999	N	6.28 V	26.5 V	1.04 V	1.80 V	0.640 V	0.800 V	0.290 V	0.20 W	8.5 V	N	N	1.220 V
7/17/2000	N	6.10 V	24.9 V	0.82 V	1.90 V	0.620 V	0.780 V	0.300 V	0.20 W	7.0 V	N	N	1.540 V
7/02/2001	N	6.02 V	26.0 V	0.75 V	1.75 V	0.600 V	0.780 V	0.310 V	0.20 W	7.5 V	N	N	1.500 V
7/09/2002	N	5.48 V	22.9 V	0.32 V	1.68 V	0.525 V	0.720 V	0.265 V	0.26 V	7.3 V	N	N	1.380 V
7/22/2003	4.75 V	5.93 V	30.0 V	0.59 V	1.88 V	0.575 V	0.805 V	0.310 V	0.27 V	7.1 V	N	N	1.340 V
7/13/2004	5.10 V	5.77 V	21.0 V	0.47 V	1.74 V	0.535 V	0.715 V	0.265 V	0.20 V	7.3 V	N	N	1.620 V
7/07/2005	4.50 V	6.29 V	22.0 V	N	1.80 V	0.590 V	0.710 V	0.275 V	0.17 V	6.9 V	N	N	1.360 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/07/1981	0.0400 V	0.0840 V	0.1600 V	0.0010 V	0.0030 V	0.0050 V	0.0040 V	0.12 V	0.014 V	0.031 C	3.2 V	0.40 V
7/24/1982	0.0850 V	0.0870 V	0.1400 V	O	0.0040 V	0.0120 V	N	N	N	N	N	N
8/02/1983	0.0400 V	0.0780 V	0.1300 V	0.0020 V	O	0.0150 V	N	N	N	N	N	N
7/25/1984	0.0700 V	0.0730 V	0.1300 V	0.0010 V	0.0040 V	0.0090 V	N	N	N	N	N	N
8/20/1985	0.0880 V	0.0940 V	0.1000 V	0.0010 V	0.0050 V	0.0080 V	N	N	N	N	N	N
7/21/1986	0.0410 V	0.0610 V	0.1100 V	0.0010 W	0.0030 V	0.0050 V	N	N	N	N	N	N
7/15/1987	0.0600 V	0.0460 V	0.0810 V	0.0020 V	0.0020 V	0.0050 V	0.0020 W	0.15 V	0.018 V	0.020 W	2.3 V	0.20 T
7/21/1988	0.0720 T	0.0790 V	0.1300 V	0.0016 T	0.0050 T	0.0063 V	N	N	N	N	2.8 V	N
7/26/1989	0.0590 T	0.0780 V	0.1300 V	0.0015 T	0.0040 T	0.0060 V	N	N	N	N	2.5 V	N
7/25/1990	0.0700 T	0.0840 V	0.1400 V	0.0005 W	0.0040 T	0.0090 V	N	N	N	N	3.2 V	0.40 T
7/09/1991	0.0300 T	0.0750 V	0.1300 V	0.0020 T	0.0030 T	0.0050 V	0.0020 T	0.15 V	0.018 V	0.030 V	2.7 V	0.20 T
7/08/1992	0.0440 T	0.0640 V	0.0950 T	0.0005 W	0.0020 W	0.0050 V	0.0060 T	0.17 V	0.022 V	0.025 V	2.8 V	0.20 W
6/06/1993	N	N	N	N	N	N	N	N	N	N	N	N
7/25/1994	0.0640 T	0.0770 V	0.1100 V	0.0017 T	0.0030 T	0.0049 V	0.0040 T	0.18 V	0.026 V	0.030 V	3.0 V	0.40 T
7/10/1995	0.0400 T	0.0960 V	0.1100 V	0.0020 V	0.0040 T	0.0045 V	0.0020 W	0.16 V	0.004 T	0.005 T	3.2 V	0.20 W
7/08/1996	0.0400 T	0.0920 V	0.1100 V	0.0010 V	0.0035 T	0.0045 V	0.0020 W	0.18 V	0.008 T	0.005 W	2.9 V	0.20 W
7/07/1997	0.0409 V	0.0711 V	0.0968 V	0.0008 D	0.0036 V	0.0034 V	0.0090 V*	0.18 V	0.016 V	0.010 V	3.4 V	0.38 V
7/12/1998	0.0267 V	0.0602 V	0.0581 V	0.0008 D	0.0028 V	0.0030 V	0.0020 W	0.18 V	0.008 T	0.005 W	2.9 V	0.80 T
7/13/1999	0.0303 V	0.0433 V	0.0476 V	0.0008 D	0.0015 D	0.0018 V	0.0040 T	0.16 V	0.002 W	0.015 T	3.4 V	0.20 W
7/17/2000	0.0241 V	0.0567 V	0.0495 V	0.0008 D	0.0024 V	0.0026 V	0.0020 W	0.16 V	0.008 T	0.005 W	2.8 V	0.20 W
7/02/2001	0.0350 V	0.0550 V	0.0671 V	0.0008 D	0.0023 V	0.0028 V	0.0040 T	0.16 V	0.008 T	0.015 T	3.5 V	0.80 T
7/09/2002	0.0193 V	0.0713 V	0.0821 V	0.0009 V	0.0038 V	0.0042 V	0.0025 V*	0.16 V	0.024 V	0.012 V	3.2 V	0.24 V
7/22/2003	0.0345 V	0.0475 V	0.0687 V	0.0008 D	0.0027 V	0.0049 V	0.0039 V*	0.23 V	0.034 V	0.002 W	3.9 V	0.40 V
7/13/2004	0.0320 V	0.0408 V	0.0808 V	0.0009 V	0.0015 D	0.0028 V	0.0032 V*	0.13 V	0.010 V	0.008 T	3.5 V	0.40 V
7/07/2005	0.0316 V	0.0400 V	0.0532 V	0.0012 V	0.0023 V	0.0026 V	0.0036 V*	0.31 V	0.008 T	0.004 T	3.3 V	0.30 V

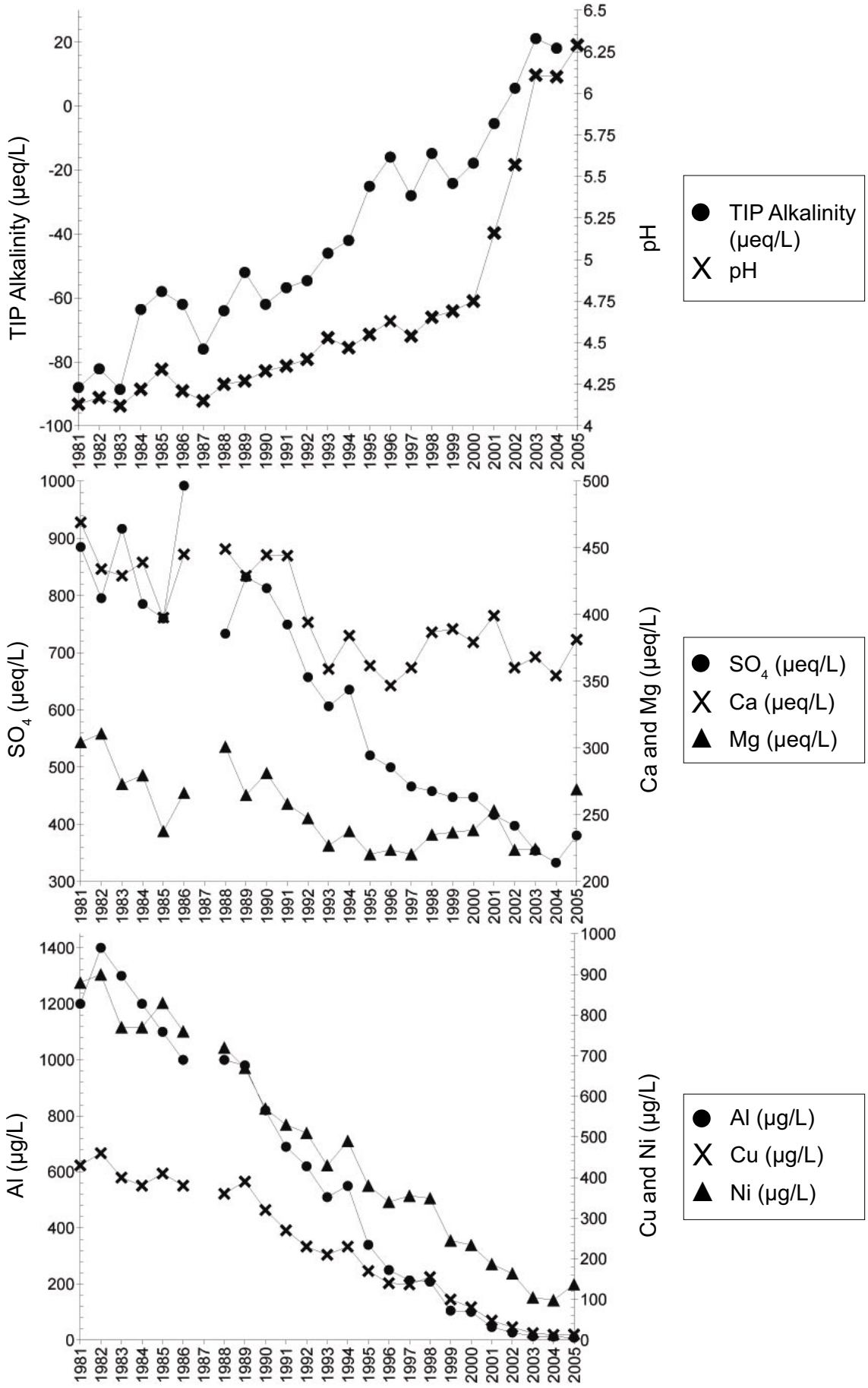
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Silver Lake



SES ID #	220	**Shoreline length (km)**	2.83
Township	Broder	**Maximum depth (m)**	10.0
Latitude	46°25’	**Mean depth (m)**	4.8
Longitude	81°00’	**Volume (x 10^4 m^3)**	111
Distance from Sudbury (km)	8	**Area (ha)**	21.75
Elevation (m)	280	**Road access**	Yes
Watershed code	2CF08		

Silver Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

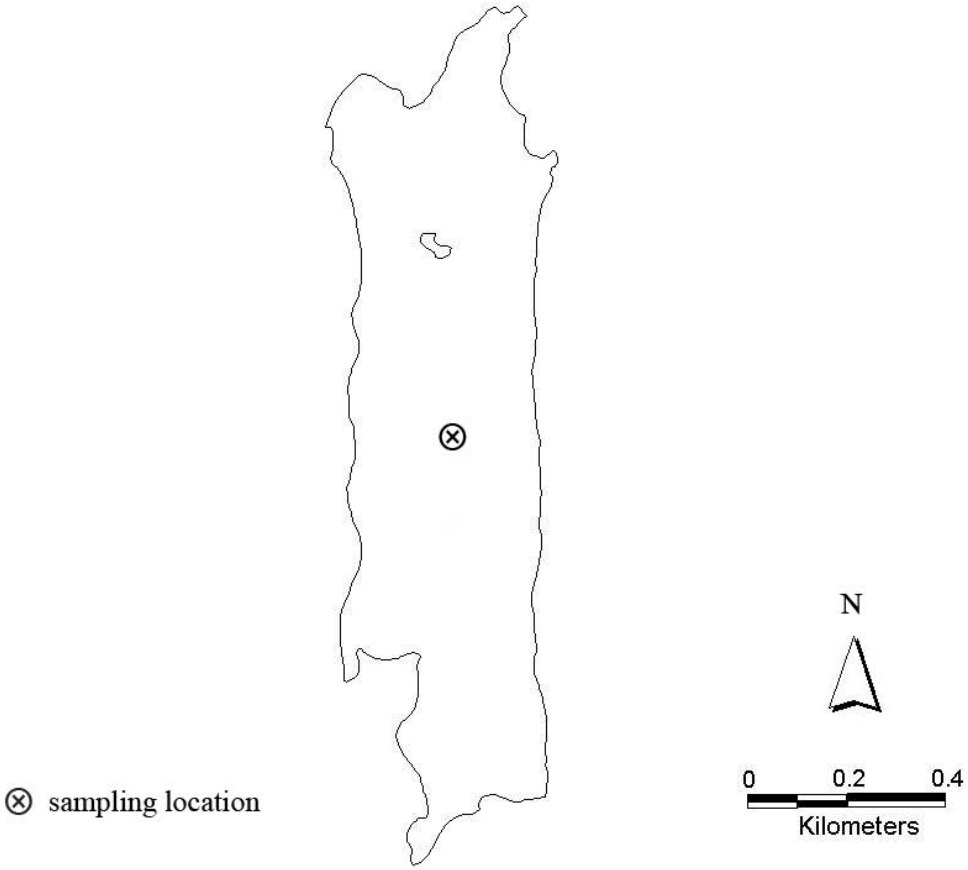
SILVER SES # 220

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/04/1981	7.70 V	4.13 V	326.0 V	-4.40 V	9.40 V	3.700 V	34.000 V	1.250 V	66.00 V	42.5 V	N	2.7 V	2.100 V
8/03/1982	6.50 V	4.17 V	318.0 V	-4.11 V	8.70 V	3.780 V	N	N	N	38.2 V	N	0.3 V	N
8/25/1983	8.40 V	4.12 V	325.0 V	-4.43 V	8.60 V	3.320 V	34.800 V	1.220 V	42.60 V	44.0 V	N	1.0 V	2.010 V
8/01/1984	8.40 V	4.22 V	310.0 V	-3.18 V	8.80 V	3.400 V	35.000 V	1.110 V	51.65 V	37.7 V	1.0 V	N	1.980 V
7/11/1985	6.00 V	4.34 V	300.0 V	-2.90 V	7.97 V	2.890 V	36.520 V	1.200 V	61.05 V	36.5 V	0.5 W	N	1.810 V
7/21/1986	8.20 V	4.21 V	330.0 V	-3.10 V	8.92 V	3.240 V	38.600 V	1.220 V	69.00 V	47.7 V	1.0 T	N	1.880 V
8/04/1987	6.10 V	4.15 V	360.0 V	-3.80 V	N	N	N	N	N	N	N	N	N
7/07/1988	6.30 V	4.25 V	375.0 V	-3.20 V	9.00 V	3.660 V	47.300 V	1.380 V	77.10 V	35.2 V	0.5 W	N	2.040 V
6/28/1989	4.50 V	4.27 V	353.0 V	-2.60 V	8.60 V	3.220 V	41.900 V	1.380 V	72.30 V	40.0 V	0.5 W	N	2.180 V
7/24/1990	8.50 V	4.33 V	367.0 V	-3.10 V	8.91 V	3.420 V	47.200 V	1.410 V	78.10 V	39.0 V	0.5 T	N	2.160 V
7/15/1991	7.80 V	4.36 V	366.0 V	-2.84 C	8.90 V	3.140 V	50.700 V	1.300 V	76.10 V	36.0 V	0.5 W	N	2.140 V
6/30/1992	N	4.40 V	344.0 V	-2.73 C	7.90 V	3.010 V	46.500 V	1.220 V	75.20 V	31.6 V	0.5 W	N	2.120 V
6/28/1993	6.50 V	4.53 V	321.0 V	-2.30 V	7.20 V	2.760 V	40.700 V	1.085 V	70.50 V	29.1 V	0.2 W	N	2.120 V
6/28/1994	5.20 V	4.47 V	332.0 V	-2.10 V	7.70 V	2.890 V	42.840 V	1.152 V	74.00 V	30.5 V	0.2 W	N	2.160 V
6/26/1995	N	4.55 V	303.0 V	-1.25 C	7.25 V	2.680 V	52.300 V	1.050 V	70.30 V	25.0 V	0.6 T	N	2.160 V
7/02/1996	N	4.63 V	310.0 V	-0.80 C	6.95 V	2.720 V	43.800 V	1.300 V	73.60 V	24.0 V	1.0 V	N	2.040 V
7/14/1997	N	4.54 V	329.0 V	-1.40 V	7.22 V	2.680 V	45.000 V	1.140 V	78.70 V	22.4 V	O	N	2.160 V
7/06/1998	N	4.65 V	346.0 V	-0.74 V	7.75 V	2.860 V	48.600 V	1.220 V	81.80 V	22.0 V	N	N	1.960 V
7/13/1999	N	4.69 V	358.0 V	-1.21 V	7.80 V	2.880 V	51.700 V	1.210 V	85.60 V	21.5 V	N	N	1.400 V
7/05/2000	N	4.75 V	357.0 V	-0.89 V	7.60 V	2.900 V	51.700 V	1.300 V	88.40 V	21.5 V	N	N	0.960 V
7/03/2001	N	5.16 V	384.0 V	-0.27 V	8.00 V	3.080 V	58.300 V	1.390 V	96.80 V	20.0 V	N	N	0.480 V
7/10/2002	N	5.57 V	351.0 V	0.28 V	7.22 V	2.720 V	53.300 V	1.270 V	93.60 V	19.1 V	N	N	0.340 V
7/30/2003	N	6.11 V	351.0 V	1.06 V	7.38 V	2.730 V	55.500 V	1.490 V	92.00 V	17.0 V	N	N	0.120 V
7/05/2004	4.10 V	6.10 V	315.0 V	0.91 V	7.10 V	O	O	O	92.20 V	16.0 V	N	N	0.040 T
6/27/2005	4.00 V	6.29 V	355.0 V	N	7.64 V	3.270 V	54.500 V	1.150 V	88.70 V	18.3 V	N	N	0.040 T

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/04/1981	0.1800 V	0.2400 V	1.2000 V	0.4300 V	0.8800 V	0.1200 V	0.0020 V	0.12 V	0.044 V	0.171 C	0.1 V	0.40 V
8/03/1982	0.0850 V	0.2450 V	1.4000 V	0.4600 V	0.9000 V	0.1200 V	N	N	N	N	N	N
8/25/1983	0.1150 V	0.2250 V	1.3000 V	0.4000 V	0.7700 V	0.1100 V	N	N	N	N	N	N
8/01/1984	0.1200 V	0.1960 V	1.2000 V	0.3800 V	0.7700 V	0.0960 V	N	N	N	N	N	N
7/11/1985	0.1400 V	0.1900 V	1.1000 V	0.4100 V	0.8300 V	0.1100 V	N	N	N	N	N	N
7/21/1986	0.1100 V	0.1700 V	1.0000 V	0.3800 V	0.7600 V	0.0970 V	N	N	N	N	N	N
8/04/1987	N	N	N	N	N	N	N	N	N	N	N	N
7/07/1988	0.0950 T	0.1900 V	1.0000 V	0.3600 V	0.7200 V	0.0940 V	N	N	N	N	0.1 W	N
6/28/1989	0.0800 T	0.1700 V	0.9800 V	0.3900 V	0.6700 V	0.0870 V	N	N	N	N	0.4 T	N
7/24/1990	0.0800 T	0.1600 V	0.8200 V	0.3200 V	0.5700 V	0.0930 V	N	N	N	N	0.6 V	0.20 W
7/15/1991	0.1100 V	0.1600 V	0.6900 V	0.2700 V	0.5300 V	0.0840 V	0.0020 T	0.14 V	0.030 V	0.135 V	0.4 T	0.20 W
6/30/1992	0.0670 T	0.1400 V	0.6200 V	0.2300 V	0.5100 V	0.0680 V	0.0020 T	0.15 V	0.038 V	0.120 V	0.5 V	0.20 T
6/28/1993	0.0510 T	0.1200 V	0.5100 V	0.2100 V	0.4300 V	0.0610 V	0.0040 T	0.12 V	0.024 V	0.170 V	0.5 V	0.20 W
6/28/1994	0.0910 T	0.1500 V	0.5500 V	0.2300 V	0.4900 V	0.0700 V	0.0040 T	0.12 V	0.074 V	0.140 V	0.3 T	0.20 W
6/26/1995	0.0800 T	0.1300 V	0.3400 V	0.1700 V	0.3800 V	0.0570 V	O	O	O	0.120 V	0.8 V	0.20 W
7/02/1996	0.2400 V	0.1300 V	0.2500 V	0.1400 V	0.3400 V	0.0590 V	0.0060 T	0.34 V	0.148 V	0.095 V	0.3 T	0.20 W
7/14/1997	0.1330 V	0.1460 V	0.2130 V	0.1370 V	0.3550 V	0.0544 V	0.0017 V*	0.16 V	0.146 V	0.100 V	0.3 T	0.38 V
7/06/1998	0.2040 V	0.1440 V	0.2080 V	0.1550 V	0.3490 V	0.0554 V	0.0040 T	0.12 V	0.012 V	0.060 V	0.6 V	0.20 W
7/13/1999	0.1510 V	0.1210 V	0.1050 V	0.0997 V	0.2450 V	0.0355 V	0.0040 T	0.16 V	0.074 V	0.025 V	1.2 V	0.20 W
7/05/2000	0.0730 V	0.1240 V	0.1010 V	0.0807 V	0.2340 V	0.0333 V	0.0080 T	0.16 V	0.024 V	0.069 V	1.1 V	0.20 W
7/03/2001	0.0972 V	0.1190 V	0.0464 V	0.0479 V	0.1870 V	0.0277 V	0.0080 T	0.16 V	0.044 V	0.040 V	1.1 V	0.20 W
7/10/2002	0.1080 V	0.1140 V	0.0266 V	0.0315 V	0.1640 V	0.0254 V	0.0057 V*	0.22 V	0.028 V	0.020 V	1.6 V	0.20 V
7/30/2003	0.0895 V	0.0875 V	0.0137 V	0.0170 V	0.1050 V	0.0175 V	0.0068 V*	0.28 V	0.054 V	0.008 T	2.8 V	0.70 V
7/05/2004	0.0355 V	0.0664 V	0.0119 V	0.0129 V	0.0982 V	0.0162 V	0.0042 V*	0.19 V	0.024 V	0.004 T	2.4 V	0.46 V
6/27/2005	0.0377 V	0.0822 V	0.0082 V	0.0136 V	0.1370 V	0.0213 V	0.0030 V*	0.19 V	0.008 T	0.004 T	2.2 V	0.34 V

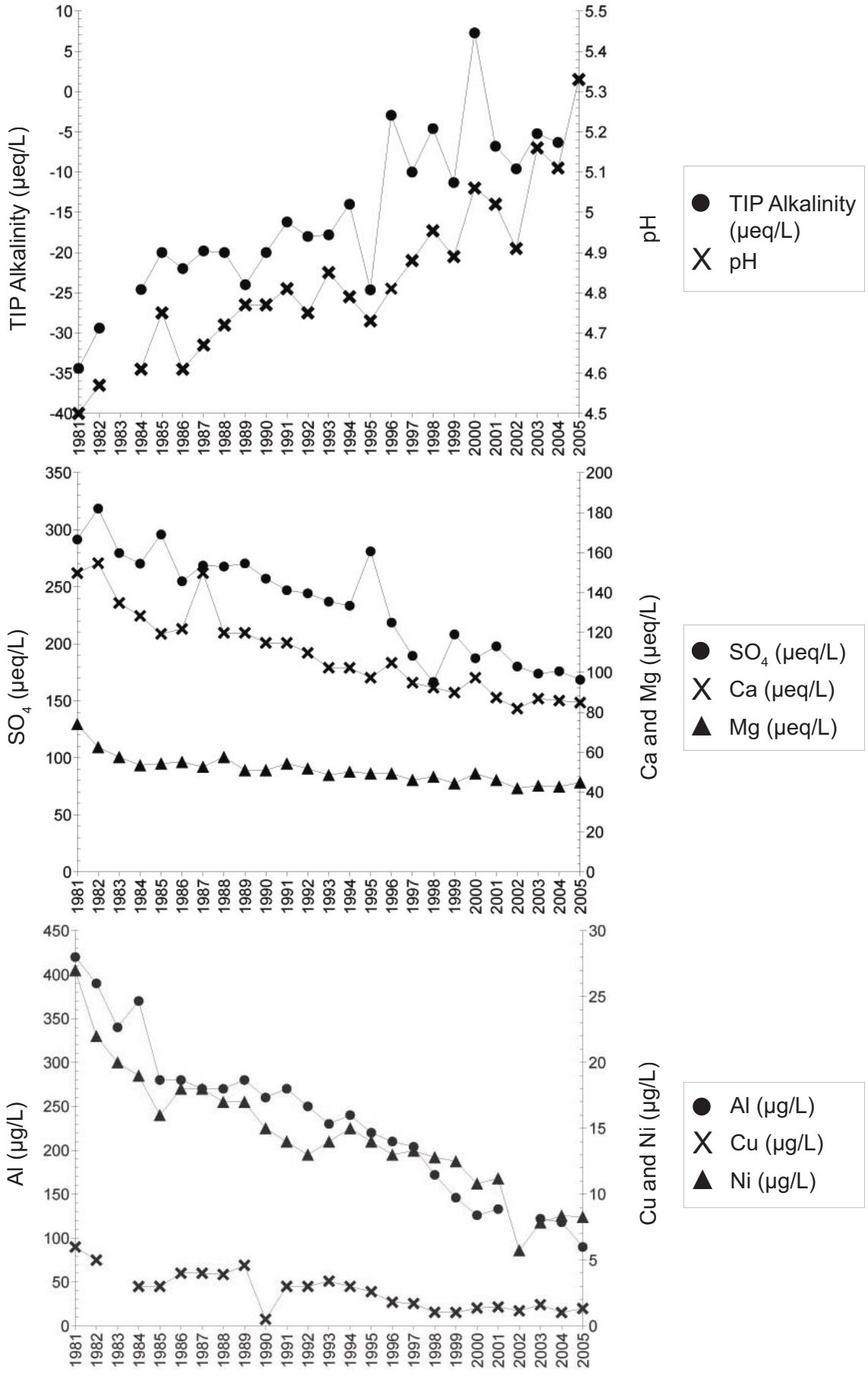
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Silvester Lake



SES ID #	245	**Shoreline length (km)**	4.56
Township	MacKelcan	**Maximum depth (m)**	not available
Latitude	46°50’	**Mean depth (m)**	not available
Longitude	80°38’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	50	**Area (ha)**	53.24
Elevation (m)	295	**Road access**	No
Watershed code	2DC02		

Silvester Lake



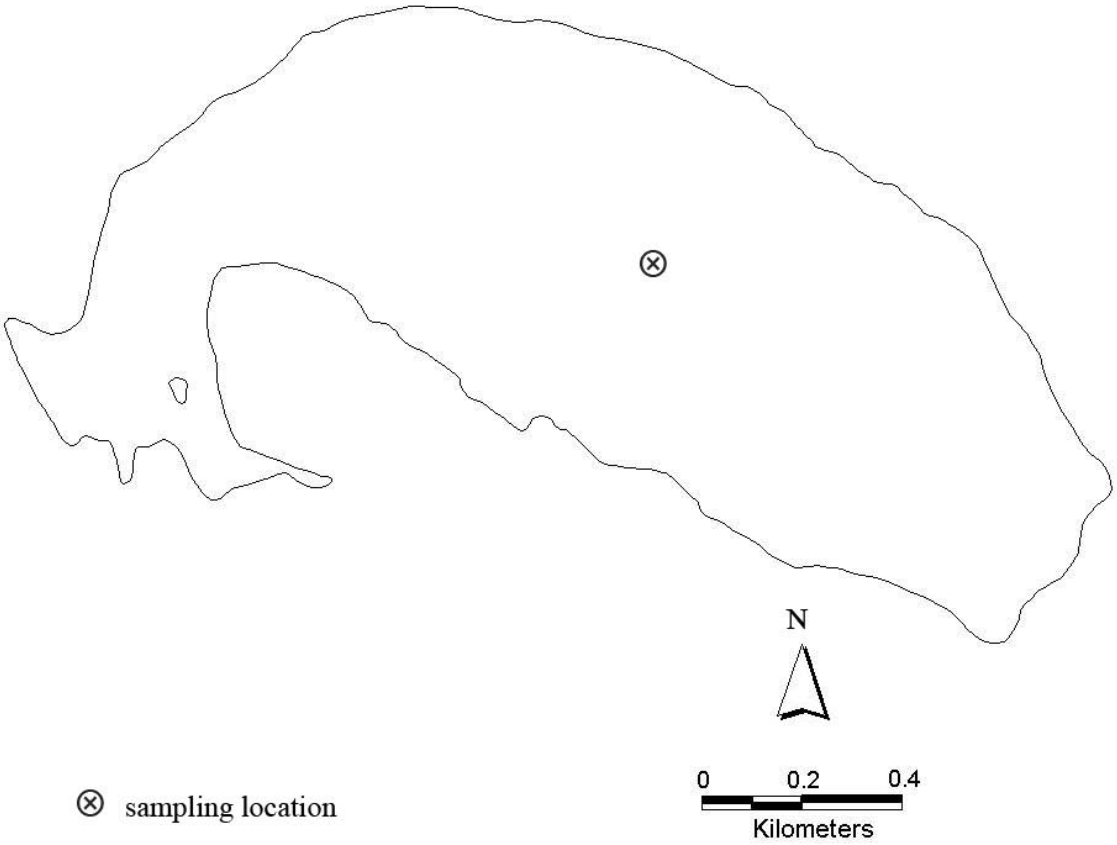
SILVESTER SES # 245

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/11/1981	10.00 V	4.50 V	44.0 V	-1.72 V	3.00 V	0.900 V	0.800 V	0.450 V	0.75 V	14.0 V	N	O	0.450 V
7/24/1982	9.50 V	4.57 V	45.0 V	-1.47 V	3.10 V	0.760 V	N	N	N	15.3 V	N	1.5 V	N
8/08/1983	9.00 V	O	O	O	2.70 V	0.700 V	O	O	O	13.4 V	N	-1.2 V	0.600 V
7/24/1984	8.50 V	4.61 V	43.0 V	-1.23 V	2.57 V	0.650 V	0.620 V	0.360 V	0.29 V	13.0 V	2.0 V	N	0.680 V
7/23/1985	9.50 V	4.75 V	41.5 V	-1.00 V	2.39 V	0.660 V	0.660 V	0.430 V	0.26 V	14.2 V	1.5 V	N	0.630 V
8/07/1986	9.00 V	4.61 V	36.5 V	-1.10 V	2.44 V	0.670 V	0.590 V	0.360 V	0.25 V	12.2 V	0.5 T	N	0.500 V
7/16/1987	9.50 V	4.67 V	40.5 V	-0.99 V	3.00 V	0.640 V	0.680 V	0.310 V	0.30 V	12.9 V	0.5 W	N	0.500 V
7/21/1988	7.10 V	4.72 V	40.3 V	-1.00 V	2.40 V	0.700 V	0.700 V	0.380 V	0.80 T	12.9 V	1.0 T	N	0.600 V
7/31/1989	9.50 V	4.77 V	39.3 V	-1.20 V	2.40 V	0.620 V	0.680 V	0.350 V	0.20 W	13.0 V	0.5 T	N	0.780 V
7/25/1990	9.50 V	4.77 V	O	-1.00 V	2.30 V	0.620 V	0.700 V	0.360 V	0.30 T	12.4 V	1.5 T	N	0.700 V
7/10/1991	10.20 V	4.81 V	37.3 V	-0.81 C	2.30 V	0.660 V	0.780 V	0.360 V	0.20 T	11.9 V	0.5 T	N	0.720 V
7/14/1992	11.00 V	4.75 V	36.5 V	-0.90 C	2.20 V	0.630 V	0.660 V	0.353 V	0.30 T	11.7 V	1.0 T	N	0.700 V
7/13/1993	10.50 V	4.85 V	35.6 V	-0.89 V	2.05 V	0.590 V	0.640 V	0.324 V	0.20 W	11.4 V	0.2 W	N	0.680 V
7/28/1994	10.50 V	4.79 V	34.7 V	-0.70 V	2.05 V	0.610 V	0.650 V	0.329 V	0.20 W	11.2 V	0.4 T	N	0.640 V
7/10/1995	N	4.73 V	34.0 V	-1.23 C	1.95 V	0.600 V	0.680 V	0.360 V	0.40 T	13.5 V	2.6 V	N	0.780 V
7/08/1996	N	4.81 V	31.0 V	-0.15 C	2.10 V	0.600 V	0.720 V	0.330 V	0.20 W	10.5 V	1.4 V	N	0.860 V
7/15/1997	N	4.88 V	31.7 V	-0.50 V	1.90 V	0.560 V	0.620 V	0.270 V	0.22 V	9.1 V	2.6 V	N	0.900 V
7/12/1998	N	4.95 V	27.7 V	-0.23 V	1.85 V	0.580 V	0.720 V	0.320 V	0.20 W	8.0 V	N	N	0.760 V
7/14/1999	N	4.89 V	31.4 V	-0.57 V	1.80 V	0.540 V	0.700 V	0.300 V	0.40 T	10.0 V	N	N	O
7/17/2000	N	5.06 V	29.6 V	0.36 V	1.95 V	0.600 V	0.700 V	0.330 V	0.20 W	9.0 V	N	N	0.680 V
7/02/2001	N	5.02 V	29.9 V	-0.34 V	1.75 V	0.560 V	0.680 V	0.330 V	0.20 W	9.5 V	N	N	0.700 V
7/09/2002	N	4.91 V	28.0 V	-0.48 V	1.64 V	0.510 V	0.645 V	0.285 V	0.32 V	8.7 V	N	N	0.840 V
7/17/2003	N	5.16 V	25.0 V	-0.26 V	1.74 V	0.525 V	0.650 V	0.300 V	0.25 V	8.4 V	N	N	0.780 V
7/12/2004	10.80 V	5.11 V	24.0 V	-0.32 V	1.72 V	0.520 V	0.670 V	0.280 V	0.29 V	8.5 V	N	N	0.940 V
7/05/2005	11.30 V	5.33 V	24.2 V	N	1.70 V	0.545 V	0.675 V	0.320 V	O	8.1 V	N	N	0.660 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/11/1981	0.0300 V	0.2040 V	0.4200 V	0.0060 V	0.0270 V	0.0160 V	0.0050 V	0.11 V	0.092 V	0.111 C	1.0 V	0.20 V
7/24/1982	0.0300 T	0.2440 V	0.3900 V	0.0050 V	0.0220 V	0.0160 V	N	N	N	N	N	N
8/08/1983	0.0350 V	0.1650 V	0.3400 V	O	0.0200 V	O	N	N	N	N	N	N
7/24/1984	0.0850 V	0.1700 V	0.3700 V	0.0030 V	0.0190 V	0.0170 V	N	N	N	N	N	N
7/23/1985	0.0380 V	0.1800 V	0.2800 V	0.0030 V	0.0160 V	0.0130 V	N	N	N	N	N	N
8/07/1986	0.0410 V	0.1700 V	0.2800 V	0.0040 V	0.0180 V	0.0120 V	N	N	N	N	N	N
7/16/1987	0.0240 V	0.1600 V	0.2700 V	0.0040 V	0.0180 V	0.0110 V	N	N	N	N	N	N
7/21/1988	0.0420 T	0.1600 V	0.2700 V	0.0039 V	0.0170 V	0.0120 V	N	N	N	N	0.7 V	N
7/31/1989	0.0430 T	0.1600 V	0.2800 V	0.0046 V	0.0170 V	0.0099 V	N	N	N	N	1.0 V	N
7/25/1990	0.0800 T	0.1400 V	0.2600 V	0.0005 W	0.0150 V	0.0120 V	N	N	N	N	1.2 V	0.20 T
7/10/1991	0.0300 T	0.1500 V	0.2700 V	0.0030 V	0.0140 V	0.0090 V	0.0020 W	0.10 V	0.032 V	0.065 V	0.7 V	0.20 W
7/14/1992	O	0.1300 V	0.2500 V	0.0030 V	0.0130 V	0.0080 V	0.0040 T	0.10 V	0.010 V	0.065 V	1.4 V	0.20 W
7/13/1993	0.0260 T	0.1100 V	0.2300 V	0.0034 V	0.0140 V	0.0070 V	0.0020 T	0.10 V	0.014 V	0.055 V	0.8 V	0.20 T
7/28/1994	0.0400 T	0.1400 V	0.2400 V	0.0030 V	0.0150 V	0.0088 V	0.0040 T	0.10 V	0.016 V	0.045 V	0.7 V	0.20 W
7/10/1995	0.0400 T	0.1100 V	0.2200 V	0.0026 V	0.0140 V	0.0075 V	0.0040 T	0.10 V	0.008 T	0.085 V	0.8 V	0.20 W
7/08/1996	0.0400 T	0.1000 V	0.2100 V	0.0018 V	0.0130 V	0.0070 V	0.0020 W	0.10 V	0.020 V	O	0.9 V	0.20 W
7/15/1997	0.0514 V	0.1060 V	0.2040 V	0.0017 V	0.0133 V	0.0080 V	0.0025 V*	0.10 V	0.017 V	0.084 V	0.9 V	0.16 V
7/12/1998	0.0315 V	0.0942 V	0.1720 V	0.0010 V	0.0128 V	0.0070 V	0.0060 T	0.10 V	0.016 V	0.065 V	0.6 V	0.20 W
7/14/1999	0.0321 V	0.0943 V	0.1460 V	0.0010 V	0.0125 V	0.0063 V	0.0020 W	0.04 T	0.012 V	0.080 V	0.9 V	0.20 W
7/17/2000	0.0203 V	0.0841 V	0.1260 V	0.0014 V	0.0108 V	0.0060 V	0.0020 W	0.10 V	0.018 V	0.062 V	0.5 V	0.20 W
7/02/2001	0.0360 V	0.0822 V	0.1330 V	0.0014 V	0.0112 V	0.0058 V	0.0020 W	0.10 V	0.018 V	0.065 V	1.2 V	O
7/09/2002	O	0.0546 V	O	0.0012 V	0.0057 V	0.0030 V	0.0019 V*	0.11 V	0.020 V	0.050 V	0.9 V	0.20 V
7/17/2003	0.0354 V	0.0695 V	0.1220 V	0.0016 V	0.0079 V	0.0065 V	0.0029 V*	0.12 V	0.040 V	0.032 V	1.8 V	0.30 V
7/12/2004	0.0389 V	0.0582 V	0.1180 V	0.0010 V	0.0084 V	0.0055 V	0.0013 V*	0.09 V	0.020 V	0.040 V	1.1 V	0.26 V
7/05/2005	0.0277 V	0.0555 V	0.0899 V	0.0013 V	0.0083 V	0.0050 V	0.0019 V*	0.11 V	N	N	0.6 V	0.42 V

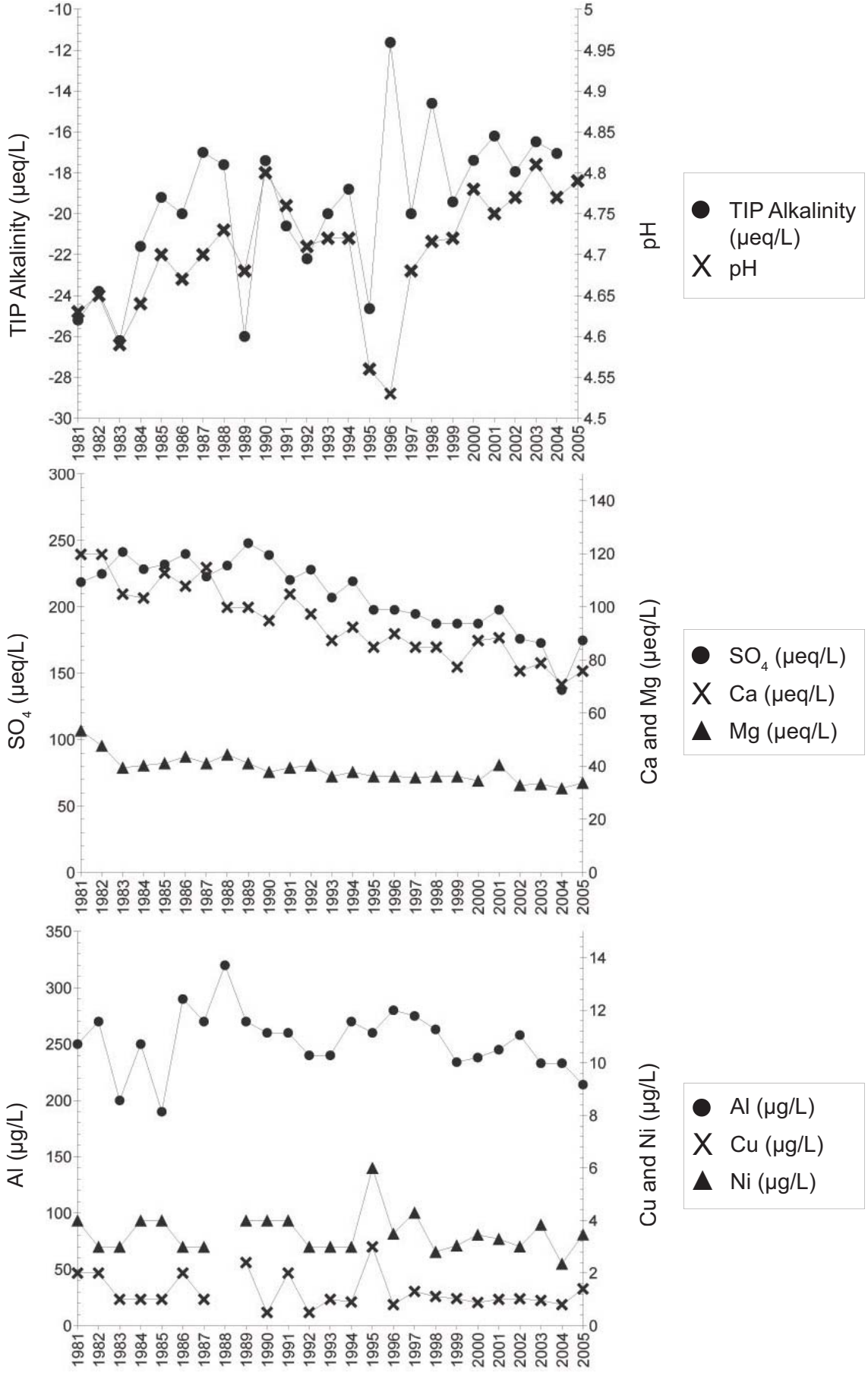
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Sunnywater Lake



SES ID #	92	**Shoreline length (km)**	6.81
Township	Gamble	**Maximum depth (m)**	90.3
Latitude	47°23’	**Mean depth (m)**	24.1
Longitude	80°37’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	106	**Area (ha)**	140.58
Elevation (m)	486	**Road access**	No
Watershed code	2JD07		

Sunnywater Lake



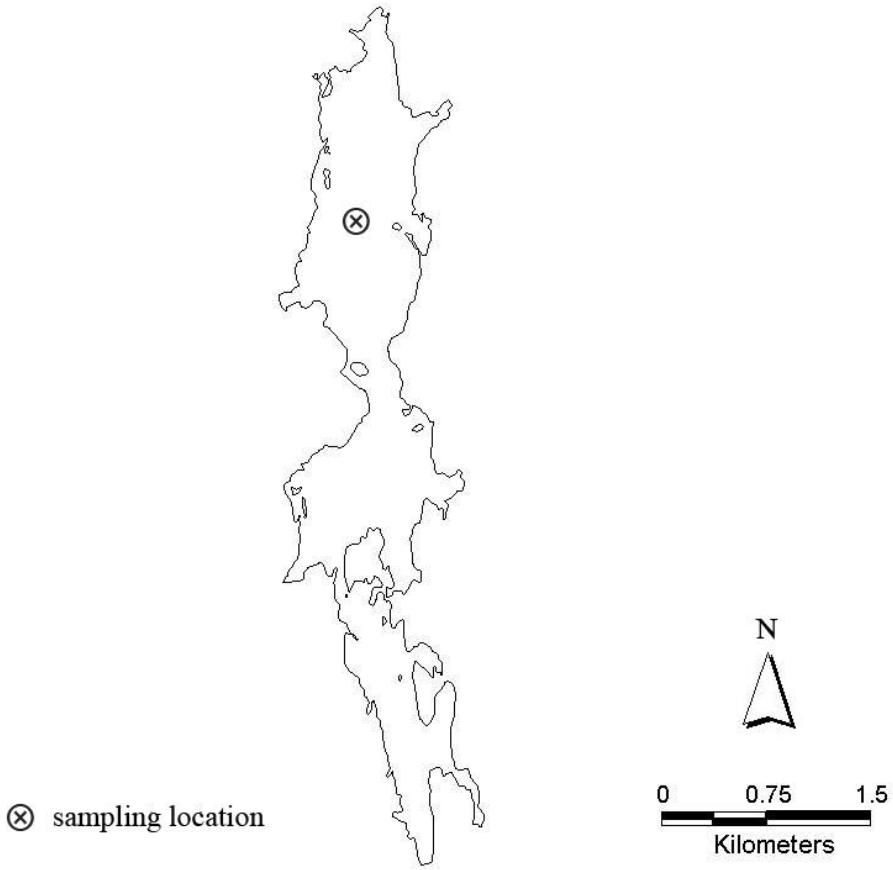
SUNNYWATER SES # 92

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/09/1981	20.50 V	4.63 V	37.0 V	-1.26 V	2.40 V	0.650 V	O	0.350 V	0.70 V	10.5 V	N	0.9 V	0.450 V
7/22/1982	24.00 V	4.65 V	34.0 V	-1.19 V	2.40 V	0.580 V	N	N	N	10.8 V	N	0.1 V	N
8/03/1983	21.00 V	4.59 V	35.2 V	-1.31 V	2.10 V	0.480 V	0.500 V	0.360 V	0.13 V	11.6 V	N	1.4 V	0.410 V
7/25/1984	17.00 V	4.64 V	37.0 V	-1.08 V	2.07 V	0.490 V	0.470 V	0.360 V	0.14 T	11.0 V	0.5 W	N	0.490 V
8/20/1985	22.00 V	4.70 V	35.0 V	-0.96 V	2.26 V	0.500 V	0.470 V	0.370 V	0.25 V	11.1 V	1.5 V	N	0.360 V
7/15/1986	24.00 V	4.67 V	37.0 V	-1.00 V	2.16 V	0.530 V	0.520 V	0.360 V	0.50 V	11.5 V	0.5 W	N	0.380 V
7/14/1987	20.00 V	4.70 V	36.5 V	-0.85 V	2.30 V	0.500 V	0.560 V	0.340 V	0.25 V	10.7 V	0.5 W	N	0.300 V
7/21/1988	22.00 V	4.73 V	37.4 V	-0.88 V	2.00 V	0.540 V	0.540 V	0.380 V	0.80 T	11.1 V	0.5 T	N	0.280 V
7/19/1989	18.80 V	4.68 V	36.0 V	-1.30 V	2.00 V	0.500 V	0.520 V	0.350 V	0.20 W	11.9 V	0.5 T	N	0.340 V
7/25/1990	20.30 V	4.80 V	34.4 V	-0.87 V	1.90 V	0.460 V	0.580 V	0.360 V	0.20 W	11.5 V	0.5 T	N	0.360 V
7/10/1991	28.00 V	4.76 V	34.7 V	-1.03 C	2.10 V	0.480 V	0.600 V	0.390 V	0.30 T	10.6 V	0.5 T	N	0.400 V
7/06/1992	15.00 V	4.71 V	34.3 V	-1.11 C	1.95 V	0.490 V	0.510 V	0.330 V	0.20 T	11.0 V	0.5 W	N	0.360 V
7/07/1993	18.80 V	4.72 V	34.2 V	-1.00 V	1.75 V	0.440 V	0.480 V	0.324 V	0.20 W	9.9 V	0.2 W	N	0.460 V
7/04/1994	19.20 V	4.72 V	34.2 V	-0.94 V	1.85 V	0.460 V	0.490 V	0.325 V	0.20 W	10.5 V	0.2 W	N	0.460 V
7/12/1995	N	4.56 V	31.0 V	-1.23 C	1.70 V	0.440 V	0.480 V	0.300 V	0.20 W	9.5 V	0.2 W	N	0.460 V
7/08/1996	N	4.53 V	31.0 V	-0.58 C	1.80 V	0.440 V	0.500 V	0.310 V	0.40 T	9.5 V	1.4 V	N	0.400 V
7/07/1997	N	4.68 V	32.2 V	-1.00 V	1.70 V	0.435 V	0.465 V	0.280 V	0.18 V	9.4 V	0.8 T	N	0.460 V
7/28/1998	N	4.72 V	31.0 V	-0.73 V	1.70 V	0.440 V	0.520 V	0.320 V	0.40 T	9.0 V	N	N	0.440 V
7/19/1999	N	4.72 V	31.0 V	-0.97 V	1.55 V	0.440 V	0.520 V	0.310 V	0.20 W	9.0 V	N	N	0.400 V
7/24/2000	N	4.78 V	30.6 V	-0.87 V	1.75 V	0.420 V	0.520 V	0.340 V	0.20 W	9.0 V	N	N	0.440 V
6/25/2001	N	4.75 V	31.2 V	-0.81 V	1.77 V	0.492 V	0.480 V	0.290 V	0.40 T	9.5 V	N	N	0.400 V
6/24/2002	N	4.77 V	29.8 V	-0.90 V	1.52 V	0.400 V	0.490 V	0.285 V	0.25 V	8.5 V	N	N	0.480 V
7/30/2003	22.50 V	4.81 V	O	-0.82 V	1.58 V	0.405 V	0.500 V	0.345 V	0.13 V	8.3 V	N	N	0.280 V
7/19/2004	17.50 V	4.77 V	27.0 V	-0.85 V	1.42 V	0.385 V	0.510 V	0.270 V	0.19 V	6.6 V	N	N	0.400 V
7/20/2005	27.25 V	4.79 V	27.2 V	N	1.52 V	0.410 V	0.490 V	0.285 V	0.20 V	8.4 V	N	N	O

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/09/1981	0.0500 V	0.2780 V	0.2500 V	0.0020 V	0.0040 V	0.0120 V	0.0020 V	0.12 V	0.028 V	0.131 C	1.2 V	0.60 V
7/22/1982	0.0250 T	0.3060 V	0.2700 V	0.0020 V	0.0030 V	0.0120 V	N	N	N	N	N	N
8/03/1983	0.0200 V	0.2850 V	0.2000 V	0.0010 V	0.0030 V	0.0160 V	N	N	N	N	N	N
7/25/1984	0.0500 V	0.2600 V	0.2500 V	0.0010 L	0.0040 V	0.0110 V	N	N	N	N	N	N
8/20/1985	0.0340 V	0.3200 V	0.1900 V	0.0010 V	0.0040 V	0.0140 V	N	N	N	N	N	N
7/15/1986	0.0310 V	0.2600 V	0.2900 V	0.0020 V	0.0030 V	0.0150 V	N	N	N	N	N	N
7/14/1987	0.0330 V	0.2600 V	0.2700 V	0.0010 V	0.0030 V	0.0170 V	N	N	N	N	N	N
7/21/1988	0.0840 T	0.2600 V	0.3200 V	O	O	0.0200 V	N	N	N	N	0.1 W	N
7/19/1989	0.0240 T	0.2400 V	0.2700 V	0.0024 T	0.0040 T	0.0120 V	N	N	N	N	0.1 T	N
7/25/1990	0.0400 T	0.2400 V	0.2600 V	0.0005 W	0.0040 T	0.0120 V	N	N	N	N	0.2 T	0.20 T
7/10/1991	0.0300 T	0.2300 V	0.2600 V	0.0020 T	0.0040 T	0.0100 V	0.0020 W	0.10 V	0.048 V	0.120 V	0.1 T	0.20 W
7/06/1992	0.1000 T	0.2200 V	0.2400 V	0.0005 W	0.0030 T	0.0110 V	0.0020 W	0.05 T	0.034 V	0.120 V	0.1 W	0.20 W
7/07/1993	0.0240 T	0.2100 V	0.2400 V	0.0010 T	0.0030 T	0.0086 V	0.0020 T	0.06 T	0.032 V	0.130 V	0.1 W	0.20 W
7/04/1994	0.0300 T	0.2400 V	0.2700 V	0.0009 T	0.0030 T	0.0110 V	0.0020 W	0.04 T	0.030 V	0.125 V	0.2 T	0.20 W
7/12/1995	0.0400 T	0.2500 V	0.2600 V	0.0030 V	0.0060 V	0.0100 V	0.0020 W	0.04 T	0.014 V	0.110 V	0.1 T	0.20 W
7/08/1996	0.0200 W	0.2400 V	0.2800 V	0.0008 T	0.0035 T	0.0100 V	0.0020 W	0.08 T	0.016 V	O	0.1 W	0.20 W
7/07/1997	0.0275 V	0.2490 V	0.2750 V	0.0013 V	0.0043 V	0.0101 V	0.0024 V*	0.06 T	0.022 V	0.120 V	0.1 W	0.24 V
7/28/1998	0.0209 V	0.2380 V	0.2630 V	0.0011 V	0.0028 V	0.0101 V	0.0020 W	0.10 V	0.012 V	0.125 V	0.1 W	0.20 W
7/19/1999	0.0189 V	0.2080 V	0.2340 V	0.0010 V	0.0031 V	0.0092 V	0.0040 T	0.04 T	0.024 V	0.105 V	0.1 W	0.20 W
7/24/2000	0.0223 V	0.2220 V	0.2380 V	0.0009 V	0.0035 V	0.0094 V	0.0020 W	0.04 T	0.022 V	0.119 V	0.1 W	0.20 W
6/25/2001	0.0198 V	0.2280 V	0.2450 V	0.0010 V	0.0033 V	0.0095 V	O	0.18 V	0.012 V	0.099 V	0.1 W	0.20 W
6/24/2002	0.0239 V	0.2280 V	0.2580 V	0.0010 V	0.0030 V	0.0094 V	0.0019 V*	0.07 V	0.026 V	0.106 V	0.2 T	0.18 V
7/30/2003	0.0204 V	0.1860 V	0.2330 V	0.0010 V	0.0038 V	0.0120 V	0.0026 V*	0.11 V	0.042 V	0.108 V	0.3 T	0.18 V
7/19/2004	0.0174 V	0.1780 V	0.2330 V	0.0008 D	0.0024 V	0.0073 V	0.0020 V*	0.08 V	0.016 V	0.108 V	0.3 T	0.14 V
7/20/2005	0.0202 V	0.1960 V	0.2140 V	0.0014 V	0.0035 V	0.0084 V	0.0030 V*	0.05 V	0.018 V	0.116 V	0.1 W	0.18 V

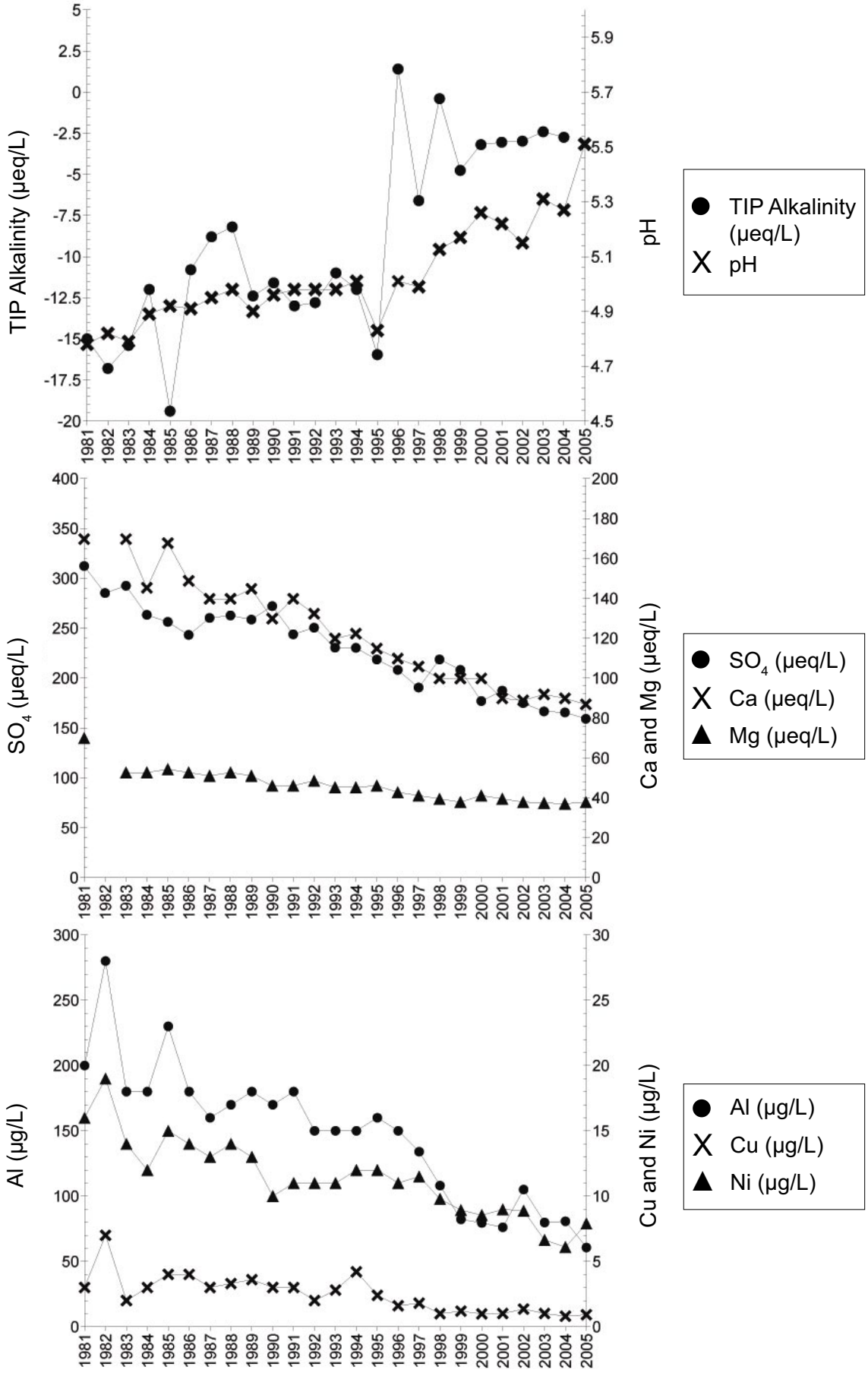
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Telfer Lake



SES ID #	118	**Shoreline length (km)**	24.31
Township	Telfer	**Maximum depth (m)**	32.9
Latitude	46°56’	**Mean depth (m)**	10.4
Longitude	80°47’	**Volume (x 10^4 m^3)**	4506
Distance from Sudbury (km)	52	**Area (ha)**	336.28
Elevation (m)	319	**Road access**	Yes
Watershed code	2DA04		

Telfer Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

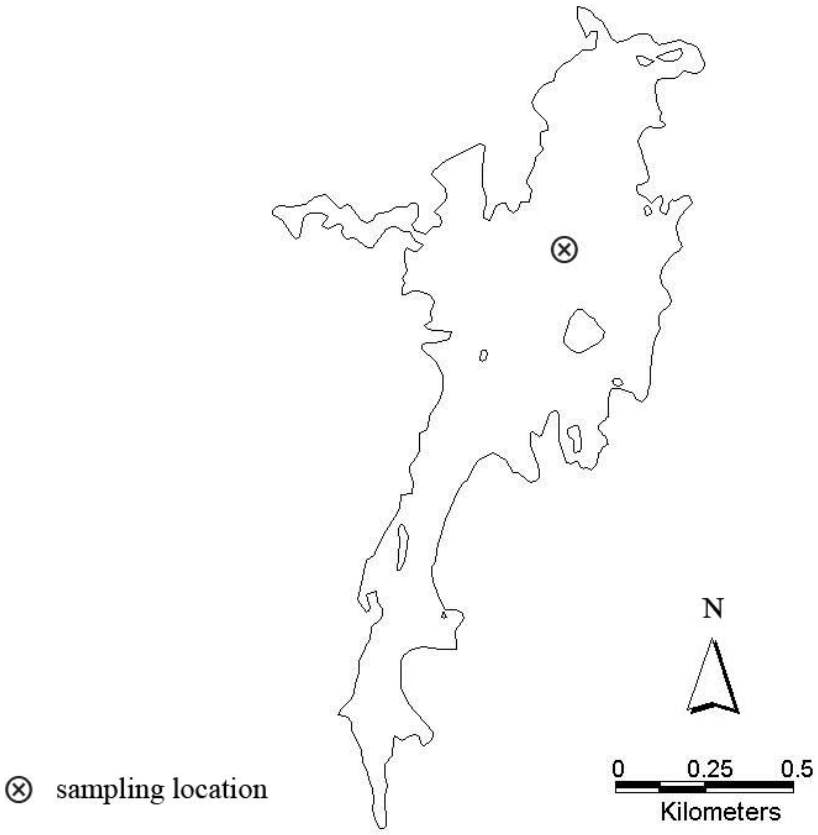
TELFER SES # 118

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/21/1981	14.90 V	4.78 V	42.0 V	-0.75 V	3.40 V	0.850 V	O	0.350 V	0.35 V	15.0 V	N	-1.4 V	0.550 V
7/25/1982	13.50 V	4.82 V	42.0 V	-0.84 V	N	N	N	N	N	13.7 V	N	1.5 V	N
8/07/1983	15.00 V	4.79 V	39.1 V	-0.77 V	3.40 V	0.640 V	0.650 V	0.340 V	0.26 V	14.1 V	N	4.6 V	0.630 V
7/23/1984	13.50 V	4.89 V	40.5 V	-0.60 V	2.91 V	0.640 V	0.680 V	0.310 V	0.21 V	12.7 V	1.0 V	N	0.600 V
7/23/1985	14.00 V	4.92 V	39.0 V	-0.97 V	3.36 V	0.660 V	0.650 V	0.320 V	0.31 V	12.3 V	2.5 V	N	0.640 V
8/07/1986	19.00 V	4.91 V	38.5 V	-0.54 V	2.98 V	0.640 V	0.630 V	0.340 V	0.25 V	11.7 V	0.5 T	N	0.520 V
7/16/1987	15.00 V	4.95 V	37.5 V	-0.44 V	2.80 V	0.620 V	0.660 V	0.280 V	0.25 V	12.5 V	0.5 T	N	0.480 V
7/21/1988	18.50 V	4.98 V	37.2 V	-0.41 V	2.80 V	0.640 V	0.680 V	0.300 V	O	12.6 V	1.5 T	N	0.560 V
7/18/1989	11.50 V	4.90 V	36.5 V	-0.62 V	2.90 V	0.620 V	0.700 V	0.290 V	0.20 T	12.4 V	1.0 T	N	0.860 V
7/16/1990	12.00 V	4.96 V	37.0 V	-0.58 V	2.60 V	0.560 V	0.680 V	0.300 V	0.20 T	13.1 V	1.0 T	N	0.740 V
7/10/1991	18.50 V	4.98 V	34.9 V	-0.65 C	2.80 V	0.560 V	0.760 V	0.290 V	0.30 T	11.7 V	0.5 T	N	0.700 V
7/08/1992	12.00 V	4.98 V	34.9 V	-0.64 C	2.65 V	0.590 V	0.730 V	0.320 V	0.30 T	12.0 V	0.5 T	N	0.620 V
7/06/1993	12.30 V	4.98 V	34.2 V	-0.55 V	2.40 V	0.550 V	0.660 V	0.259 V	0.20 W	11.1 V	0.6 T	N	0.600 V
7/25/1994	8.10 V	5.01 V	32.7 V	-0.60 V	2.45 V	0.550 V	0.670 V	0.271 V	0.20 W	11.1 V	1.0 T	N	0.460 V
7/10/1995	N	4.83 V	32.0 V	-0.80 C	2.30 V	0.560 V	0.700 V	0.270 V	0.40 T	10.5 V	0.2 T	N	0.580 V
7/08/1996	N	5.01 V	30.0 V	0.07 C	2.20 V	0.520 V	0.700 V	0.260 V	0.20 W	10.0 V	0.8 T	N	0.640 V
7/15/1997	N	4.99 V	29.5 V	-0.33 V	2.12 V	0.500 V	0.620 V	0.205 V	0.19 V	9.2 V	1.6 V	N	0.720 V
7/12/1998	N	5.13 V	27.6 V	-0.02 V	2.00 V	0.480 V	0.660 V	0.260 V	0.20 W	10.5 V	N	N	0.600 V
7/14/1999	N	5.17 V	28.4 V	-0.24 V	2.00 V	0.460 V	0.700 V	0.230 V	0.20 W	10.0 V	N	N	O
7/17/2000	N	5.26 V	27.1 V	-0.16 V	2.00 V	0.500 V	0.700 V	0.240 V	0.20 W	8.5 V	N	N	0.400 V
7/02/2001	N	5.22 V	27.4 V	-0.15 V	1.80 V	0.480 V	0.680 V	0.260 V	0.20 W	9.0 V	N	N	0.360 V
7/09/2002	N	5.15 V	25.6 V	-0.15 V	1.78 V	0.460 V	0.685 V	0.230 V	0.31 V	8.4 V	N	N	0.540 V
7/17/2003	11.50 V	5.31 V	23.6 V	-0.12 V	1.84 V	0.455 V	0.670 V	0.230 V	0.23 V	8.0 V	N	N	0.520 V
7/12/2004	14.40 V	5.27 V	22.8 V	-0.14 V	1.80 V	0.450 V	0.680 V	0.215 V	0.29 V	8.0 V	N	N	0.660 V
7/05/2005	15.80 V	5.51 V	22.6 V	N	1.74 V	0.460 V	0.680 V	0.235 V	0.29 V	7.7 V	N	N	0.400 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/21/1981	O	0.2240 V	0.2000 V	0.0030 V	0.0160 V	0.0120 V	0.0090 V	0.09 V	0.016 V	0.081 C	0.3 V	0.40 V
7/25/1982	0.0350 V	0.2470 V	0.2800 V	0.0070 V	0.0190 V	0.0150 V	N	N	N	N	N	N
8/07/1983	0.0100 V	0.1900 V	0.1800 V	0.0020 V	0.0140 V	0.0100 V	N	N	N	N	N	N
7/23/1984	0.0400 T	0.1840 V	0.1800 V	0.0030 V	0.0120 V	0.0110 V	N	N	N	N	N	N
7/23/1985	0.0550 V	0.2000 V	0.2300 V	0.0040 V	0.0150 V	0.0170 V	N	N	N	N	N	N
8/07/1986	0.0260 V	0.1600 V	0.1800 V	0.0040 V	0.0140 V	0.0110 V	N	N	N	N	N	N
7/16/1987	0.0220 V	0.1500 V	0.1600 V	0.0030 V	0.0130 V	0.0110 V	N	N	N	N	N	N
7/21/1988	0.0410 T	0.1500 V	0.1700 V	0.0033 V	0.0140 V	0.0088 V	N	N	N	N	0.8 V	N
7/18/1989	0.0380 T	0.1400 V	0.1800 V	0.0036 V	0.0130 V	0.0095 V	N	N	N	N	0.6 V	N
7/16/1990	0.0200 W	0.1400 V	0.1700 V	0.0030 V	0.0100 T	0.0090 V	N	N	N	N	0.6 V	0.20 W
7/10/1991	0.0200 W	0.1300 V	0.1800 V	0.0030 V	0.0110 V	0.0100 V	0.0020 W	0.07 T	0.018 V	0.045 V	0.7 V	0.20 W
7/08/1992	0.0470 T	0.1200 V	0.1500 V	0.0020 T	0.0110 V	0.0090 V	0.0060 T	0.09 T	0.020 V	0.050 V	0.7 V	0.20 W
7/06/1993	0.0230 T	0.1200 V	0.1500 V	0.0028 V	0.0110 V	0.0085 V	0.0020 T	0.10 V	0.018 V	0.050 V	0.7 V	0.20 W
7/25/1994	0.0410 T	0.1300 V	0.1500 V	0.0042 V	0.0120 V	0.0180 V	0.0020 T	0.10 V	0.022 V	0.045 V	0.7 V	0.20 W
7/10/1995	0.0400 T	0.1300 V	0.1600 V	0.0024 V	0.0120 V	0.0080 V	O	O	0.008 T	0.045 V	0.7 V	0.20 W
7/08/1996	0.0400 T	0.1200 V	0.1500 V	0.0016 V	0.0110 V	0.0075 V	0.0020 W	0.10 V	0.024 V	0.005 W	0.7 V	0.20 W
7/15/1997	0.0273 V	0.1110 V	0.1340 V	0.0018 V	0.0115 V	0.0071 V	0.0026 V*	0.16 V	0.017 V	0.052 V	0.7 V	0.26 V
7/12/1998	0.0155 V	0.0933 V	0.1080 V	0.0010 V	0.0098 V	0.0063 V	0.0040 T	0.12 V	0.012 V	O	0.8 V	0.20 W
7/14/1999	0.0167 V	0.0850 V	0.0822 V	0.0012 V	0.0089 V	0.0059 V	0.0020 W	0.06 T	0.006 T	0.030 V	1.2 V	0.20 W
7/17/2000	0.0195 V	0.0808 V	0.0795 V	0.0010 V	0.0085 V	0.0060 V	0.0020 W	0.10 V	0.020 V	0.021 V	0.8 V	0.20 W
7/02/2001	0.0163 V	0.0813 V	0.0761 V	0.0010 V	0.0090 V	0.0054 V	0.0020 W	0.12 V	0.016 V	0.025 V	1.0 V	O
7/09/2002	0.0304 V	0.0851 V	0.1050 V	0.0014 V	0.0089 V	0.0055 V	0.0029 V*	0.14 V	0.044 V	0.024 V	0.9 V	0.16 V
7/17/2003	0.0140 V	0.0689 V	0.0798 V	0.0010 V	0.0066 V	0.0063 V	0.0023 V*	0.15 V	0.032 V	0.026 V	1.7 V	0.24 V
7/12/2004	0.0167 V	0.0580 V	0.0807 V	0.0008 D	0.0061 V	0.0052 V	0.0014 V*	0.11 V	0.022 V	0.020 V	1.5 V	0.16 V
7/05/2005	0.0142 V	0.0523 V	0.0606 V	0.0009 V	0.0079 V	0.0049 V	0.0017 V*	0.12 V	N	N	0.5 V	0.44 V

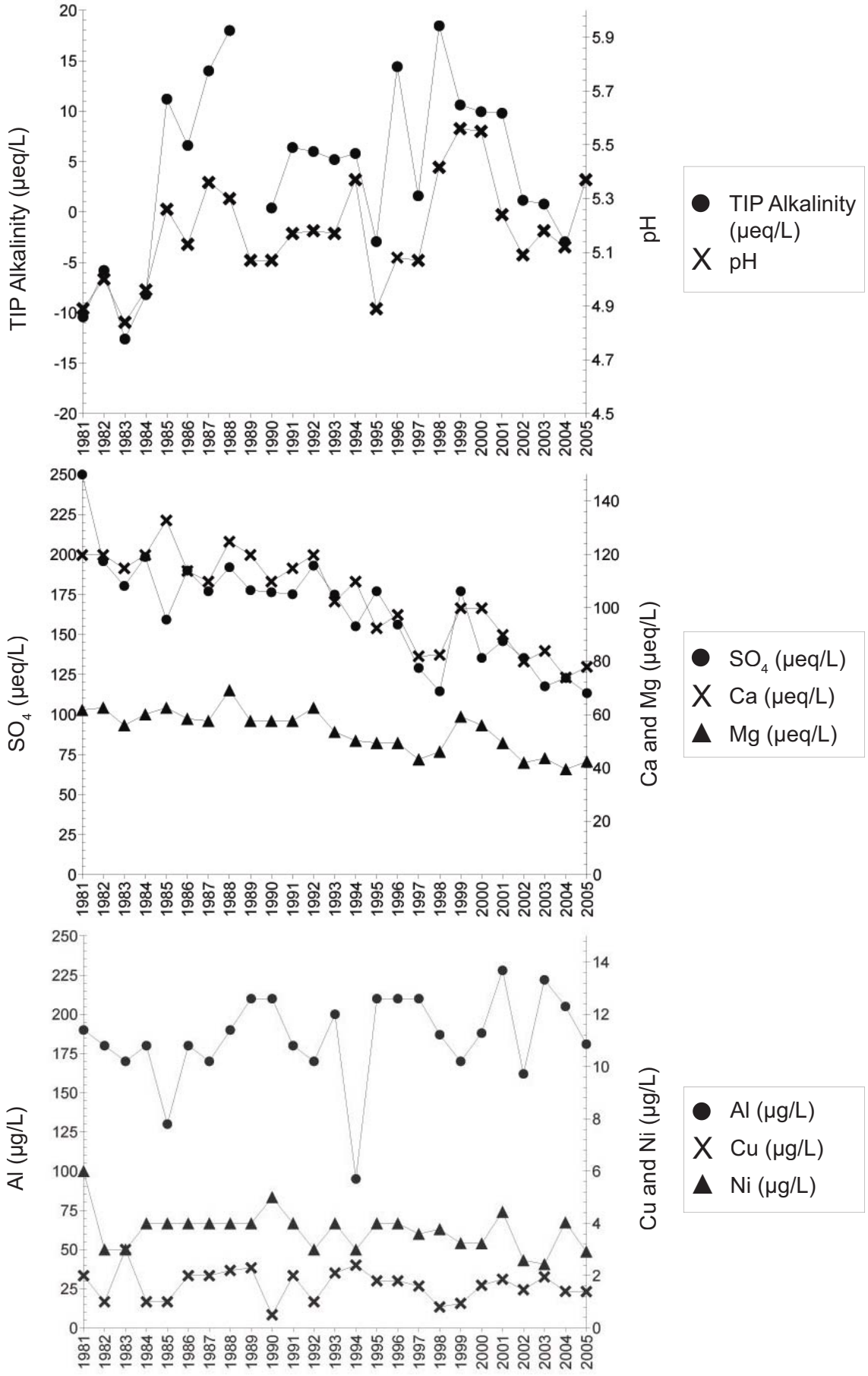
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Tillie Lake



SES ID #	248	**Shoreline length (km)**	9.49
Township	Beresford	**Maximum depth (m)**	11.0
Latitude	47°02’	**Mean depth (m)**	4.7
Longitude	81°00’	**Volume (x 10^4 m^3)**	320
Distance from Sudbury (km)	64	**Area (ha)**	76.71
Elevation (m)	404	**Road access**	No
Watershed code	2DA05		

Tillie Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

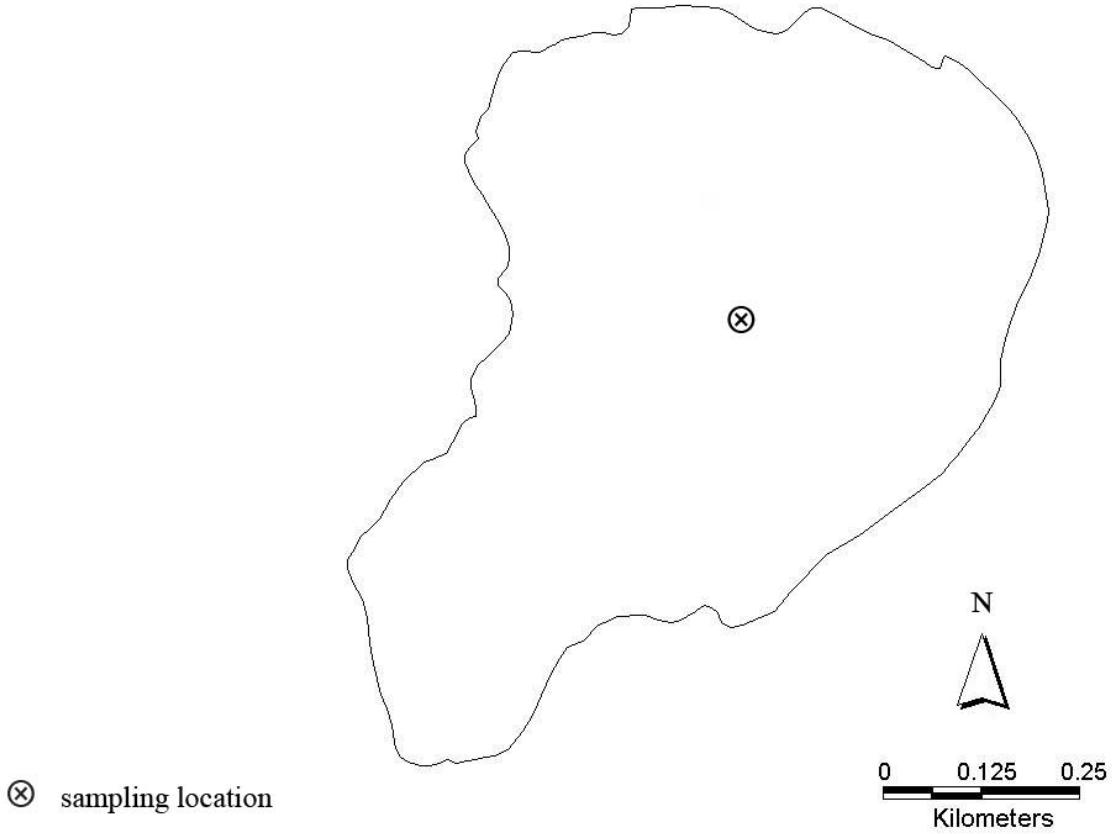
TILLIE SES # 248

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/21/1981	2.10 V	4.89 V	33.0 V	-0.52 V	2.40 V	0.750 V	0.600 V	0.400 V	0.50 V	12.0 V	N	56.2 V	1.300 V
7/18/1982	1.50 V	5.00 V	32.0 V	-0.29 V	2.40 V	0.760 V	N	N	N	9.4 V	N	76.4 V	N
7/25/1983	1.50 V	4.84 V	33.6 V	-0.63 V	2.30 V	0.680 V	0.600 V	0.400 V	0.20 V	8.7 V	N	55.4 V	1.520 V
7/25/1984	1.50 V	4.96 V	33.5 V	-0.41 V	2.40 V	0.730 V	0.690 V	0.300 V	0.19 V	9.5 V	62.0 V	N	1.400 V
8/20/1985	1.50 V	5.26 V	30.0 V	0.56 V	2.66 V	0.760 V	0.680 V	0.350 V	0.58 V	7.7 V	76.0 V	N	1.120 V
7/21/1986	2.00 V	5.13 V	30.0 V	0.33 V	2.28 V	0.710 V	0.680 V	0.310 V	0.40 V	9.1 V	55.0 V	N	1.500 V
7/16/1987	2.00 V	5.36 V	28.5 V	0.70 V	2.20 V	0.700 V	0.760 V	0.270 V	0.25 V	8.5 V	52.0 V	N	1.420 V
7/20/1988	2.40 V	5.30 V	31.5 V	0.90 V	2.50 V	0.840 V	0.740 V	0.330 V	0.90 T	9.2 V	61.0 V	N	1.720 V
7/31/1989	1.90 V	5.07 V	31.6 V	O	2.40 V	0.700 V	0.740 V	0.290 V	0.50 T	8.5 V	65.5 V	N	2.040 V
7/25/1990	2.40 V	5.07 V	30.0 V	0.02 V	2.20 V	0.700 V	0.780 V	0.290 V	0.50 T	8.5 V	58.5 V	N	1.340 V
7/09/1991	3.50 V	5.17 V	29.3 V	0.32 C	2.30 V	0.700 V	0.860 V	0.390 V	0.40 T	8.4 V	46.0 V	N	1.580 V
7/08/1992	1.95 V	5.18 V	30.8 V	0.30 C	2.40 V	0.760 V	0.780 V	0.340 V	0.60 T	9.3 V	47.5 V	N	1.680 V
7/06/1993	1.10 V	5.17 V	29.2 V	0.26 V	2.05 V	0.650 V	0.710 V	0.312 V	0.30 T	8.4 V	30.4 V	N	1.440 V
7/25/1994	1.70 V	5.37 V	26.8 V	0.29 V	2.20 V	0.610 V	0.680 V	0.303 V	0.20 T	7.5 V	16.2 V	N	0.840 V
7/10/1995	N	4.89 V	26.0 V	-0.15 C	1.85 V	0.600 V	0.700 V	0.290 V	0.40 T	8.5 V	54.0 V	N	1.140 V
7/08/1996	N	5.08 V	26.0 V	0.72 C	1.95 V	0.600 V	0.720 V	0.300 V	0.40 T	7.5 V	51.0 V	N	1.720 V
7/15/1997	N	5.07 V	24.1 V	0.08 V	1.64 V	0.525 V	0.665 V	0.215 V	0.14 V	6.2 V	69.0 V	N	1.220 V
7/13/1998	N	5.42 V	23.9 V	0.92 V	1.65 V	0.560 V	0.800 V	0.280 V	0.40 T	5.5 V	N	N	1.060 V
7/13/1999	N	5.56 V	28.8 V	0.53 V	2.00 V	0.720 V	0.900 V	0.270 V	0.40 T	8.5 V	N	N	0.760 V
7/17/2000	N	5.55 V	26.0 V	0.50 V	2.00 V	0.680 V	0.840 V	0.260 V	0.40 T	6.5 V	N	N	1.280 V
7/02/2001	N	5.24 V	26.3 V	0.49 V	1.80 V	0.600 V	0.760 V	0.260 V	0.40 T	7.0 V	N	N	1.380 V
7/09/2002	N	5.09 V	23.9 V	0.06 V	1.60 V	0.510 V	0.750 V	0.260 V	0.33 V	6.5 V	N	N	1.120 V
7/24/2003	1.40 V	5.18 V	31.2 V	0.04 V	1.68 V	0.530 V	0.825 V	0.300 V	0.19 V	5.7 V	N	N	0.800 V
7/13/2004	1.80 V	5.12 V	20.4 V	-0.15 V	1.48 V	0.480 V	0.710 V	0.250 V	0.22 V	5.9 V	N	N	0.880 V
7/05/2005	1.90 V	5.37 V	19.8 V	N	1.56 V	0.515 V	0.710 V	0.245 V	0.26 V	5.5 V	N	N	0.840 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/21/1981	0.5000 V	0.0980 V	0.1900 V	0.0020 V	0.0060 V	0.0060 V	0.0140 V	0.28 V	0.048 V	0.021 C	5.5 V	1.20 V
7/18/1982	0.8500 V	0.0990 V	0.1800 V	0.0010 V	0.0030 V	0.0030 V	N	N	N	N	N	N
7/25/1983	0.3200 V	0.0830 V	0.1700 V	0.0030 V	0.0030 V	O	N	N	N	N	N	N
7/25/1984	0.5350 V	0.0950 V	0.1800 V	0.0010 V	0.0040 V	0.0060 V	N	N	N	N	N	N
8/20/1985	1.6000 V	0.1100 V	0.1300 V	0.0010 V	0.0040 V	0.0060 V	N	N	N	N	N	N
7/21/1986	0.5800 V	0.0750 V	0.1800 V	0.0020 V	0.0040 V	0.0050 V	N	N	N	N	N	N
7/16/1987	0.5200 V	0.0730 V	0.1700 V	0.0020 V	0.0040 V	0.0050 V	N	N	N	N	N	N
7/20/1988	1.1000 V	0.1000 V	0.1900 V	0.0022 T	0.0040 T	0.0049 V	N	N	N	N	6.6 V	N
7/31/1989	0.6900 V	0.1100 V	0.2100 V	0.0023 T	0.0040 T	0.0056 V	N	N	N	N	7.3 V	N
7/25/1990	0.5200 V	0.0860 V	0.2100 V	0.0005 W	0.0050 T	0.0070 V	N	N	N	N	6.3 V	0.60 T
7/09/1991	0.3400 V	0.0770 V	0.1800 V	0.0020 T	0.0040 T	0.0070 V	0.0070 T	0.29 V	0.034 V	0.035 V	6.2 V	0.60 T
7/08/1992	0.3900 V	0.0730 V	0.1700 V	0.0010 T	0.0030 T	0.0050 V	0.0140 V	0.35 V	0.052 V	0.025 V	6.5 V	0.20 T
7/06/1993	0.3300 V	0.0710 V	0.2000 V	0.0021 T	0.0040 T	0.0057 V	0.0060 T	0.38 V	0.038 V	0.030 V	7.3 V	0.60 T
7/25/1994	0.0900 T	0.0560 V	0.0950 T	0.0024 T	0.0030 T	0.0033 V	0.0080 T	0.22 V	0.030 V	0.005 W	4.2 V	0.40 T
7/10/1995	0.2600 V	0.0950 V	0.2100 V	0.0018 V	0.0040 T	0.0050 V	0.0020 T	0.32 V	0.004 T	0.015 T	8.0 V	0.20 W
7/08/1996	0.3200 V	0.0940 V	0.2100 V	0.0018 V	0.0040 T	0.0050 V	0.0100 V	0.32 V	0.028 V	0.090 V	6.7 V	0.20 W
7/15/1997	0.3140 V	0.0720 V	0.2100 V	0.0016 V	0.0036 V	0.0044 V	0.0102 V*	0.40 V	0.037 V	0.008 T	7.7 V	0.32 V
7/13/1998	0.2880 V	0.0795 V	0.1870 V	0.0008 D	0.0038 V	0.0049 V	0.0160 V	0.36 V	0.012 V	0.005 W	6.7 V	0.20 W
7/13/1999	0.2790 V	0.0892 V	0.1700 V	0.0009 V	0.0032 V	0.0066 V	0.0160 V	0.36 V	0.004 T	0.020 T	6.6 V	0.40 T
7/17/2000	0.3030 V	0.0802 V	0.1880 V	0.0016 V	0.0032 V	0.0049 V	0.0120 V	0.36 V	0.010 V	0.005 W	7.3 V	0.20 W
7/02/2001	0.4030 V	0.0962 V	0.2280 V	0.0019 V	0.0044 V	0.0055 V	0.0180 V	0.40 V	0.012 V	0.013 T	9.0 V	0.40 T
7/09/2002	0.0976 V	0.0930 V	0.1620 V	0.0015 V	0.0026 V	0.0033 V	0.0141 V*	0.32 V	0.064 V	0.012 V	7.4 V	0.52 V
7/24/2003	0.3600 V	0.0669 V	0.2220 V	0.0020 V	0.0024 V	0.0046 W	0.0115 V*	0.36 V	0.064 V	0.008 T	10.3 V	0.62 V
7/13/2004	0.2960 V	0.0517 V	0.2050 V	0.0014 V	0.0040 V	0.0035 V	0.0114 V*	0.28 V	0.006 T	0.006 T	7.8 V	0.54 V
7/05/2005	0.3070 V	0.0491 V	0.1810 V	0.0014 V	0.0029 V	0.0038 V	0.0108 V*	0.34 V	N	N	7.7 V	0.58 V

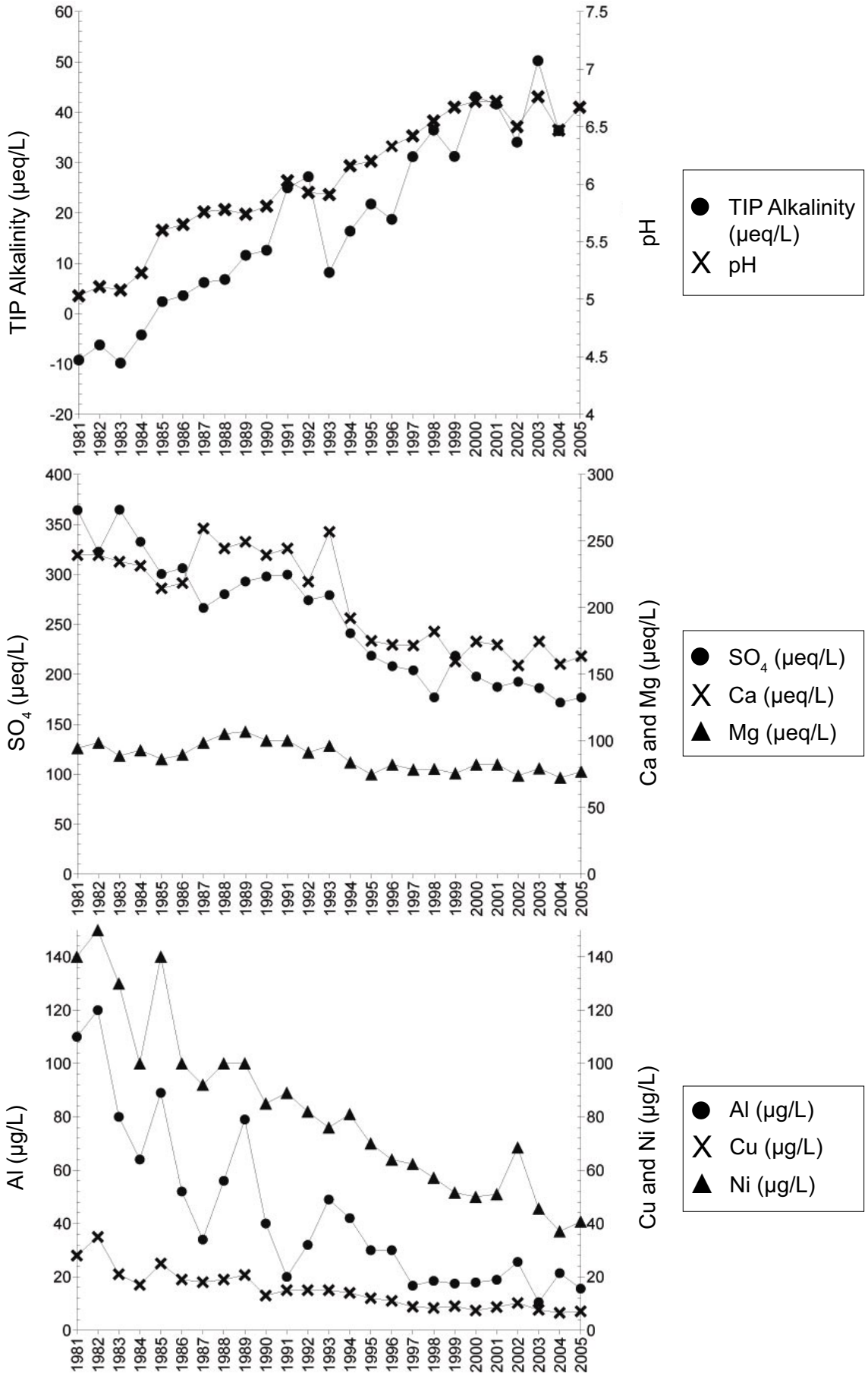
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Tilton Lake



SES ID #	228	**Shoreline length (km)**	3.14
Township	Tilton	**Maximum depth (m)**	12.0
Latitude	46°21’	**Mean depth (m)**	6.5
Longitude	81°04’	**Volume (x 10^4 m^3)**	342
Distance from Sudbury (km)	16	**Area (ha)**	51.65
Elevation (m)	252	**Road access**	Yes
Watershed code	2CF05		

Tilton Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

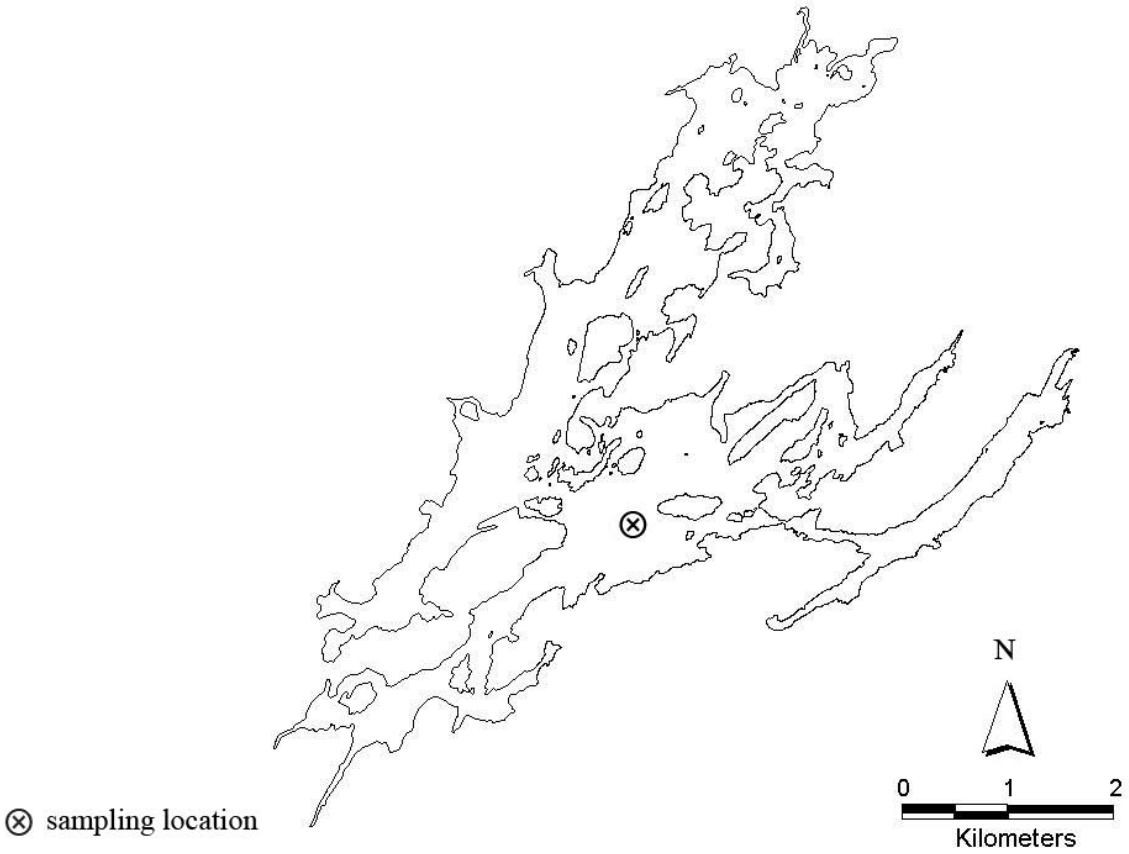
TILTON SES # 228

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/04/1981	8.80 V	5.03 V	60.0 V	-0.46 V	4.80 V	1.150 V	1.400 V	0.400 V	2.45 V	17.5 V	N	3.1 V	0.600 V
8/03/1982	9.00 V	5.11 V	62.0 V	-0.31 V	4.80 V	1.200 V	N	N	N	15.5 V	N	1.9 V	N
8/25/1983	5.00 V	5.08 V	56.5 V	-0.49 V	4.70 V	1.080 V	1.350 V	0.420 V	2.68 V	17.5 V	N	3.4 V	0.500 V
8/10/1984	8.50 V	5.23 V	58.0 V	-0.21 V	4.64 V	1.130 V	1.390 V	0.440 V	2.79 V	16.0 V	2.5 V	N	0.260 V
7/11/1985	8.00 V	5.60 V	54.0 V	0.12 V	4.30 V	1.050 V	1.510 V	0.470 V	2.87 V	14.4 V	3.0 V	N	0.500 V
7/21/1986	8.25 V	5.65 V	53.0 V	0.18 V	4.38 V	1.090 V	1.500 V	0.530 V	2.95 V	14.7 V	2.5 V	N	0.300 V
8/18/1987	6.50 V	5.76 V	54.0 V	0.31 V	5.20 V	1.200 V	1.600 V	0.500 V	3.70 V	12.8 V	2.5 V	N	0.120 V
7/06/1988	7.00 V	5.78 V	59.0 V	0.34 V	4.90 V	1.280 V	1.760 V	0.500 V	3.70 V	13.5 V	4.0 V	N	0.760 V
7/11/1989	5.70 V	5.74 V	56.0 V	0.58 V	5.00 V	1.300 V	1.640 V	0.490 V	3.70 V	14.1 V	4.5 V	N	1.040 V
7/24/1990	5.00 V	5.81 V	56.0 V	0.63 V	4.80 V	1.220 V	1.740 V	0.530 V	3.90 V	14.3 V	5.0 V	N	0.680 V
7/15/1991	8.00 V	6.03 V	54.5 V	1.25 C	4.90 V	1.220 V	1.680 V	0.480 V	3.90 V	14.4 V	3.5 V	N	1.060 V
6/30/1992	6.50 V	5.93 V	52.2 V	1.36 C	4.40 V	1.110 V	1.710 V	0.470 V	4.00 V	13.2 V	6.0 V	N	1.180 V
6/28/1993	4.50 V	5.91 V	46.8 V	0.41 V	5.15 V	1.170 V	O	0.600 V	O	13.4 V	3.0 V	N	1.140 V
6/29/1994	5.40 V	6.16 V	45.4 V	0.82 V	3.85 V	1.020 V	1.670 V	0.491 V	3.40 V	11.6 V	6.8 V	N	0.920 V
6/26/1995	N	6.20 V	43.5 V	1.09 C	3.51 V	0.910 V	1.690 V	0.492 V	3.20 V	10.5 V	7.2 V	N	0.840 V
7/02/1996	N	6.33 V	43.0 V	0.94 C	3.45 V	1.000 V	1.700 V	0.520 V	3.20 V	10.0 V	6.0 V	N	0.980 V
7/02/1997	N	6.42 V	42.0 V	1.56 V	3.44 V	0.955 V	1.580 V	0.430 V	3.10 V	9.8 V	6.0 V	N	0.920 V
7/06/1998	N	6.55 V	42.9 V	1.82 V	3.65 V	0.960 V	1.600 V	0.450 V	3.20 V	8.5 V	N	N	0.680 V
7/13/1999	N	6.67 V	43.0 V	1.56 V	3.20 V	0.920 V	1.700 V	0.410 V	3.20 V	10.5 V	N	N	O
7/05/2000	N	6.72 V	43.9 V	2.16 V	3.50 V	1.000 V	1.740 V	0.450 V	3.60 V	9.5 V	N	N	1.120 V
7/03/2001	N	6.72 V	44.7 V	2.08 V	3.45 V	1.000 V	1.820 V	0.450 V	3.60 V	9.0 V	N	N	1.040 V
7/10/2002	N	6.50 V	42.9 V	1.70 V	3.14 V	0.900 V	1.770 V	0.370 V	3.38 V	9.3 V	N	N	0.880 V
7/31/2003	5.40 V	6.76 V	O	2.51 V	3.50 V	0.965 V	1.950 V	0.470 V	3.92 V	9.0 V	N	N	0.600 V
7/05/2004	4.75 V	6.47 V	40.0 V	1.82 V	3.16 V	0.880 V	1.960 V	0.435 V	3.53 V	8.3 V	N	N	0.920 V
6/27/2005	N	6.67 V	40.6 V	N	3.28 V	0.935 V	2.050 V	0.460 V	3.83 V	8.5 V	N	N	0.720 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
8/04/1981	0.1100 V	0.1400 V	0.1100 V	0.0280 V	0.1400 V	0.0190 V	0.0020 V	0.06 V	0.006 V	0.006 C	0.9 V	0.40 V
8/03/1982	0.0300 T	0.1370 V	0.1200 V	0.0350 V	0.1500 V	0.0280 V	N	N	N	N	N	N
8/25/1983	0.0350 V	0.1090 V	0.0800 V	0.0210 V	0.1300 V	0.0180 V	N	N	N	N	N	N
8/10/1984	0.0700 V	0.0860 V	0.0640 V	0.0170 V	0.1000 V	0.0160 V	N	N	N	N	N	N
7/11/1985	0.0800 V	0.1000 V	0.0890 V	0.0250 V	0.1400 V	0.0270 V	N	N	N	N	N	N
7/21/1986	0.0240 V	0.0670 V	0.0520 V	0.0190 V	0.1000 V	0.0200 V	N	N	N	N	N	N
8/18/1987	0.0750 V	0.0680 V	0.0340 V	0.0180 V	0.0920 V	0.0110 V	N	N	N	N	N	N
7/06/1988	0.1200 V	0.0780 V	0.0560 T	0.0190 V	0.1000 V	0.0150 V	0.0110 V	0.22 V	0.014 V	0.020 W	2.4 V	0.20 T
7/11/1989	0.0800 T	0.0923 V	0.0790 T	0.0207 V	0.1000 V	0.0141 V	0.0070 T	0.22 V	0.030 V	0.005 T	1.7 V	0.60 T
7/24/1990	0.0600 T	0.0880 V	0.0400 T	0.0130 V	0.0850 V	0.0240 V	N	N	N	N	2.3 V	0.60 T
7/15/1991	0.0300 T	0.0610 V	0.0200 T	0.0150 V	0.0890 V	0.0140 V	0.0030 T	0.19 V	0.012 V	0.005 T	2.5 V	0.40 T
6/30/1992	0.0510 T	0.0490 V	0.0320 T	0.0150 V	0.0820 V	0.0110 V	0.0040 T	0.20 V	0.010 V	0.005 T	2.4 V	1.00 V
6/28/1993	0.0410 T	0.0420 V	0.0490 T	0.0150 V	0.0760 V	0.0110 V	0.0060 T	0.22 V	0.026 V	0.010 T	2.3 V	0.40 T
6/29/1994	0.0580 T	0.0410 V	0.0420 T	0.0140 V	0.0810 V	0.0120 V	0.0080 T	0.20 V	0.038 V	0.005 W	2.4 V	0.20 T
6/26/1995	0.0400 T	0.0460 V	0.0300 T	0.0120 V	0.0700 V	0.0095 V	O	O	0.004 T	0.015 T	2.8 V	0.20 W
7/02/1996	0.0600 T	0.0340 V	0.0300 T	0.0110 V	0.0640 V	0.0090 V	0.0040 T	0.30 V	0.032 V	0.005 W	2.3 V	0.20 W
7/02/1997	0.0254 V	0.0283 V	0.0167 V	0.0088 V	0.0623 V	0.0112 V	0.0050 V*	0.18 V	0.008 V	0.004 T	1.9 V	0.60 V
7/06/1998	0.0416 V	0.0160 V	0.0185 V	0.0083 V	0.0572 V	0.0067 V	0.0040 T	0.20 V	0.002 W	0.005 W	2.4 V	0.80 T
7/13/1999	0.0415 V	0.0194 V	0.0175 V	0.0090 V	0.0516 V	0.0056 V	0.0040 T	0.16 V	0.002 W	0.015 T	2.9 V	0.80 T
7/05/2000	0.0208 V	0.0185 V	0.0179 V	0.0074 V	0.0500 V	0.0066 V	0.0060 T	0.20 V	0.002 W	0.005 W	3.1 V	0.80 T
7/03/2001	0.0336 V	0.0256 V	0.0189 V	0.0087 V	0.0510 V	0.0056 V	0.0060 T	0.20 V	0.004 T	0.005 W	2.9 V	0.80 T
7/10/2002	0.0714 V	0.0597 V	0.0256 V	0.0102 V	0.0685 V	0.0085 V	0.0068 V*	0.23 V	0.028 V	0.004 T	2.6 V	0.52 V
7/31/2003	0.0217 V	0.0232 V	0.0105 V	0.0077 V	0.0456 V	0.0056 V	0.0051 V*	0.23 V	0.024 V	0.002 W	2.8 V	0.70 V
7/05/2004	0.0185 V	0.0172 V	0.0214 V	0.0065 V	0.0371 V	0.0054 V	0.0044 V*	0.11 V	0.016 V	0.004 T	2.4 V	0.66 V
6/27/2005	0.0146 V	0.0128 V	0.0156 V	0.0071 V	0.0407 V	0.0047 V	0.0043 V*	0.14 V	0.012 V	0.002 W	2.3 V	0.58 V

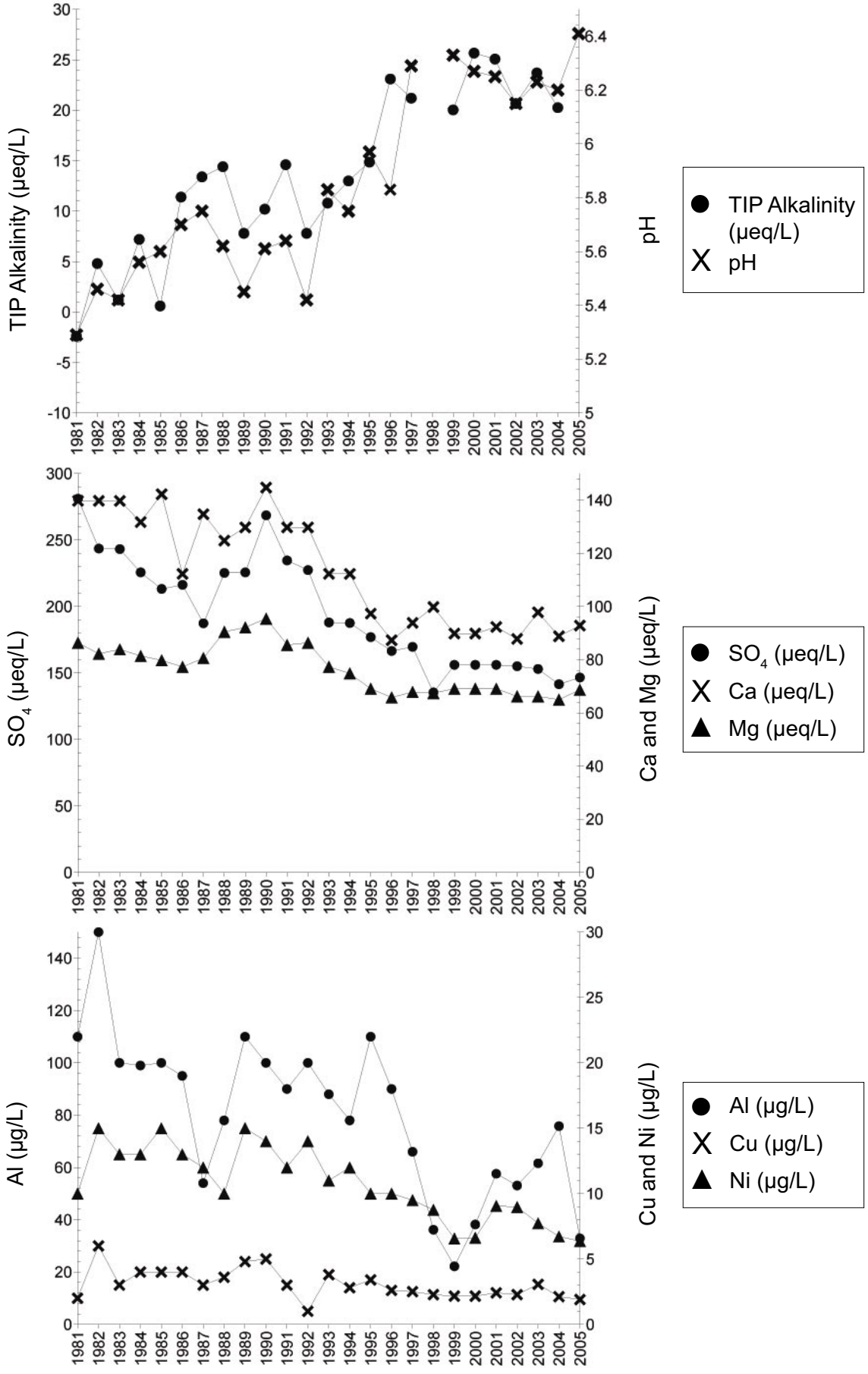
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Tyson Lake



SES ID #	113	**Shoreline length (km)**	78.22
Township	Sale/Attlee	**Maximum depth (m)**	39.6
Latitude	46°07’	**Mean depth (m)**	11.9
Longitude	81°06’	**Volume (x 10^4 m^3)**	13592
Distance from Sudbury (km)	48	**Area (ha)**	1087.90
Elevation (m)	207	**Road access**	Yes
Watershed code	2CF03		

Tyson Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

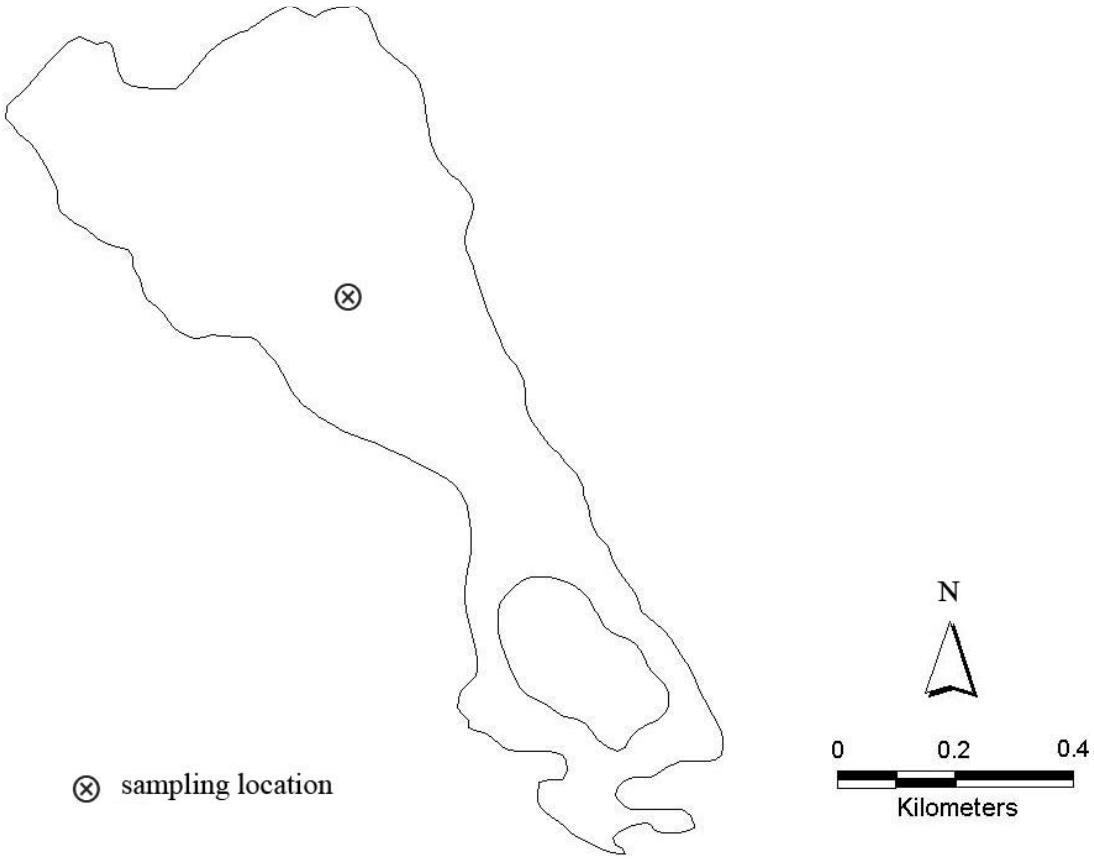
TYSON SES # 113

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/13/1981	6.50 V	5.29 V	40.0 V	-0.12 V	2.80 V	1.050 V	1.200 V	0.450 V	0.85 V	13.5 V	N	9.9 V	1.200 V
7/12/1982	3.50 V	5.46 V	39.0 V	0.24 V	2.80 V	1.000 V	N	N	N	11.7 V	N	11.7 V	N
8/01/1983	4.00 V	5.42 V	37.7 V	0.06 V	2.80 V	1.020 V	1.100 V	0.580 V	0.60 V	11.7 V	N	11.2 V	1.390 V
7/30/1984	3.00 V	5.56 V	36.5 V	0.36 V	2.64 V	0.990 V	0.930 V	0.460 V	0.33 V	10.8 V	10.0 V	N	1.280 V
7/14/1985	4.00 V	5.60 V	37.0 V	0.03 V	2.85 V	0.970 V	0.890 V	0.490 V	0.58 V	10.2 V	14.5 V	N	1.480 V
7/08/1986	4.00 V	5.70 V	34.0 V	0.57 V	2.25 V	0.940 V	0.870 V	0.460 V	0.20 V	10.4 V	10.0 V	N	1.600 V
7/22/1987	5.20 V	5.75 V	34.0 V	0.67 V	2.70 V	0.980 V	0.940 V	0.470 V	0.45 V	9.0 V	8.5 V	N	1.360 V
6/28/1988	3.20 V	5.62 V	34.7 V	0.72 V	2.50 V	1.100 V	0.980 V	0.480 V	0.60 T	10.8 V	8.5 V	N	1.360 V
7/04/1989	5.40 V	5.45 V	37.8 V	0.39 V	2.60 V	1.120 V	1.100 V	0.510 V	0.90 T	10.8 V	10.5 V	N	1.520 V
7/04/1990	5.60 V	5.61 V	39.4 V	0.51 V	2.90 V	1.160 V	1.160 V	0.550 V	1.10 V	12.9 V	10.5 V	N	1.480 V
7/10/1991	3.80 V	5.64 V	36.4 V	0.73 C	2.60 V	1.040 V	1.000 V	0.510 V	0.90 T	11.3 V	11.0 V	N	1.460 V
7/06/1992	4.10 V	5.42 V	35.6 V	0.39 C	2.60 V	1.050 V	1.000 V	0.480 V	0.70 T	10.9 V	11.0 V	N	1.540 V
7/21/1993	3.30 V	5.83 V	32.2 V	0.54 V	2.25 V	0.940 V	0.950 V	0.425 V	0.40 T	9.0 V	13.2 V	N	1.460 V
7/11/1994	4.70 V	5.75 V	30.8 V	0.65 V	2.25 V	0.910 V	0.940 V	0.431 V	0.60 T	9.0 V	10.8 V	N	1.380 V
7/05/1995	N	5.97 V	30.1 V	0.74 C	1.95 V	0.840 V	0.920 V	0.420 V	0.40 T	8.5 V	11.6 V	N	1.200 V
7/03/1996	N	5.83 V	28.0 V	1.16 C	1.75 V	0.800 V	0.960 V	0.380 V	0.60 T	8.0 V	19.6 V	N	0.860 V
7/15/1997	N	6.29 V	27.0 V	1.06 V	1.88 V	0.825 V	0.915 V	0.405 V	0.44 V	8.2 V	16.0 V	N	1.360 V
7/07/1998	N	N	26.0 N	N	2.00 V	0.820 V	0.920 V	0.430 V	0.60 T	6.5 V	N	N	1.080 V
7/06/1999	N	6.33 V	27.6 V	1.00 V	1.80 V	0.840 V	0.960 V	0.440 V	0.60 T	7.5 V	N	N	0.680 V
7/05/2000	N	6.27 V	28.8 V	1.28 V	1.80 V	0.840 V	1.140 V	0.430 V	1.00 V	7.5 V	N	N	0.360 V
7/04/2001	N	6.25 V	24.9 V	1.25 V	1.85 V	0.840 V	1.040 V	0.430 V	0.60 T	7.5 V	N	N	0.800 V
7/08/2002	N	6.15 V	26.0 V	1.03 V	1.76 V	0.805 V	0.980 V	0.350 V	0.57 V	7.5 V	N	N	0.780 V
7/14/2003	2.40 V	6.23 V	23.0 V	1.19 V	1.96 V	0.805 V	1.080 V	0.490 V	O	7.4 V	N	N	0.740 V
7/05/2004	3.40 V	6.20 V	24.6 V	1.01 V	1.78 V	0.790 V	0.965 V	0.420 V	0.57 V	6.8 V	N	N	0.920 V
7/12/2005	3.25 V	6.41 V	27.4 V	N	1.86 V	0.835 V	1.030 V	0.420 V	0.58 V	7.1 V	13.8 V	N	0.680 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/13/1981	0.0600 V	0.0860 V	0.1100 V	0.0020 V	0.0100 V	0.0110 V	0.0050 V	0.18 V	0.034 V	0.106 C	3.3 V	0.40 V
7/12/1982	0.0600 V	0.0710 V	0.1500 V	0.0060 V	0.0150 V	0.0170 V	N	N	N	N	N	N
8/01/1983	0.0550 V	0.0860 V	0.1000 V	0.0030 V	0.0130 V	0.0170 V	N	N	N	N	N	N
7/30/1984	0.0750 V	0.0930 V	0.0990 V	0.0040 V	0.0130 V	0.0130 V	N	N	N	N	N	N
7/14/1985	0.0960 V	0.0920 V	0.1000 V	0.0040 V	0.0150 V	0.0150 V	N	N	N	N	N	N
7/08/1986	0.1000 V	0.1000 V	0.0950 V	0.0040 V	0.0130 V	0.0100 V	N	N	N	N	N	N
7/22/1987	0.0580 V	0.0840 V	0.0540 V	0.0030 V	0.0120 V	0.0010 V	N	N	N	N	N	N
6/28/1988	0.0720 T	0.0790 V	0.0780 T	0.0036 V	0.0100 T	0.0110 V	N	N	N	N	3.4 V	N
7/04/1989	0.0960 T	0.1000 V	0.1100 V	0.0048 V	0.0150 V	0.0120 V	N	N	N	N	3.6 V	N
7/04/1990	0.0800 T	0.0980 V	0.1000 T	0.0050 V	0.0140 V	0.0120 V	0.0060 T	0.29 V	0.016 V	0.090 V	3.4 V	0.20 W
7/10/1991	0.0700 T	0.0930 V	0.0900 T	0.0030 V	0.0120 V	0.0170 V	0.0070 T	0.30 V	0.034 V	0.045 V	4.2 V	0.20 T
7/06/1992	O	0.0990 V	0.1000 T	0.0010 T	0.0140 V	0.0110 V	0.0070 T	0.26 V	0.032 V	0.100 V	3.9 V	0.20 T
7/21/1993	0.0830 T	0.0710 V	0.0880 T	0.0038 V	0.0110 V	0.0110 V	0.0060 T	0.26 V	0.018 V	0.070 V	4.3 V	0.40 T
7/11/1994	0.0760 T	0.0670 V	0.0780 T	0.0028 V	0.0120 V	0.0095 V	0.0060 T	0.26 V	0.042 V	0.120 V	3.7 V	0.40 T
7/05/1995	0.0800 T	0.0700 V	0.1100 V	0.0034 V	0.0100 V	0.0080 V	0.0080 T	0.24 V	0.008 T	0.025 V	4.5 V	0.20 W
7/03/1996	0.2200 V	0.0910 V	0.0900 T	0.0026 V	0.0100 V	0.0085 V	0.0080 T	0.30 V	0.044 V	0.005 W	4.6 V	0.20 W
7/15/1997	0.0822 V	0.0476 V	0.0660 V	0.0025 V	0.0095 V	0.0066 V	0.0078 V*	0.28 V	0.034 V	0.008 T	4.0 V	0.24 V
7/07/1998	0.0431 V	0.0233 V	0.0362 V	0.0023 V	0.0088 V	0.0050 V	0.0040 T	0.26 V	0.008 T	0.005 W	4.1 V	0.20 W
7/06/1999	0.0300 V	0.0067 V	0.0222 V	0.0022 V	0.0066 V	0.0042 V	0.0040 T	0.24 V	0.002 W	0.005 W	4.0 V	0.20 W
7/05/2000	0.1040 V	0.0370 V	0.0382 V	0.0022 V	0.0066 V	0.0045 V	0.0100 V	0.28 V	0.004 T	0.005 W	4.7 V	0.20 W
7/04/2001	0.0757 V	0.0367 V	0.0576 V	0.0024 V	0.0091 V	0.0031 V	0.0100 V	0.24 V	0.016 V	0.006 T	4.8 V	0.40 T
7/08/2002	0.0686 V	0.0363 V	0.0531 V	0.0023 V	0.0090 V	0.0054 V	0.0096 V*	0.14 V	0.044 V	0.024 V	4.2 V	0.20 V
7/14/2003	0.0753 V	0.0225 V	0.0616 V	0.0031 V	0.0077 V	0.0135 V	0.0088 V*	0.32 V	0.058 V	0.006 T	5.4 V	0.44 V
7/05/2004	0.1390 V	0.0233 V	0.0758 V	0.0021 V	0.0067 V	0.0049 V	0.0082 V*	0.24 V	0.022 V	0.010 V	4.6 V	0.46 V
7/12/2005	0.0661 V	0.0098 V	0.0329 V	0.0019 V	0.0064 V	0.0035 V	0.0056 V*	0.24 V	0.006 T	0.006 T	4.7 V	0.22 V

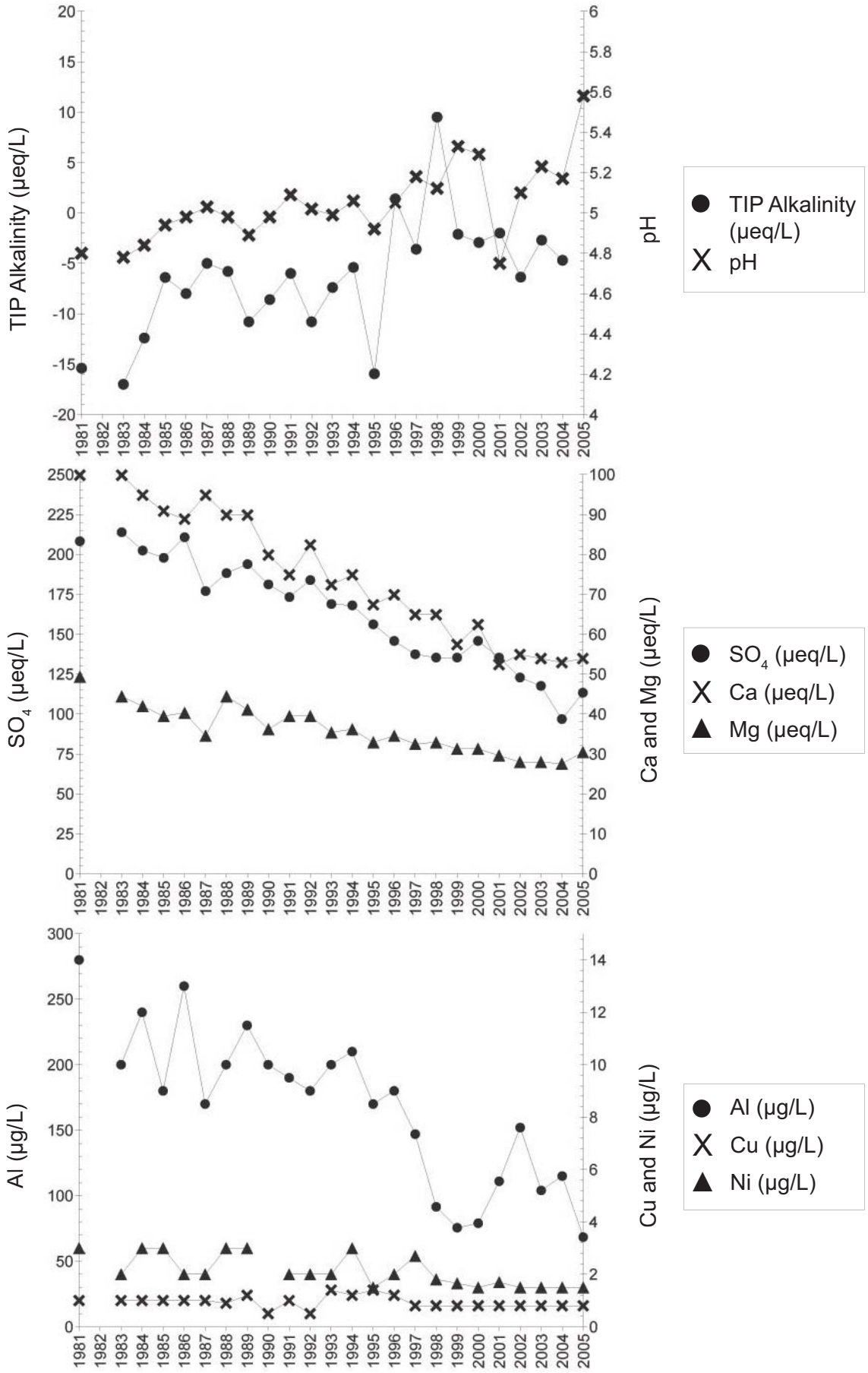
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Wabun Lake



SES ID #	197	**Shoreline length (km)**	4.73
Township	Brewster	**Maximum depth (m)**	35.0
Latitude	47°24’	**Mean depth (m)**	10.6
Longitude	80°35’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	107	**Area (ha)**	51.31
Elevation (m)	437	**Road access**	No
Watershed code	2JD03		

Wabun Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

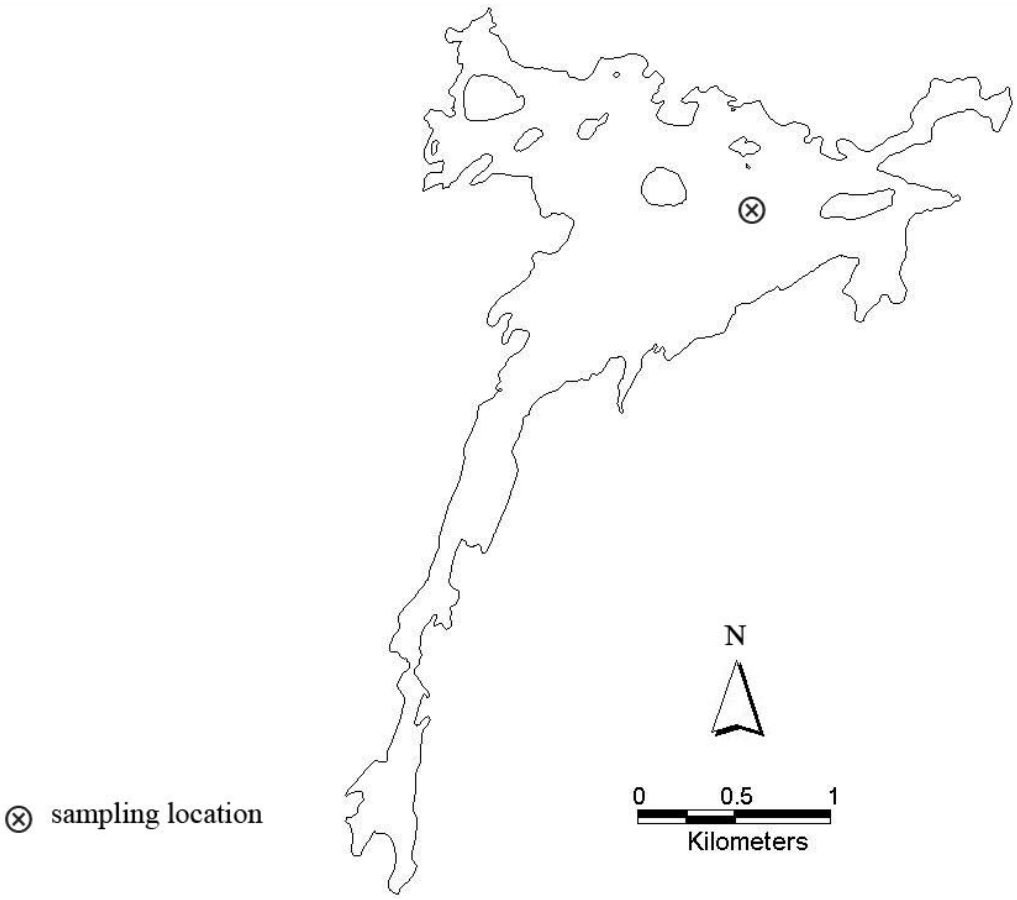
WABUN SES # 197

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/09/1981	8.90 V	4.80 V	34.0 V	-0.77 V	2.00 V	0.600 V	0.800 V	0.350 V	0.35 V	10.0 V	N	8.5 V	1.150 V
8/03/1983	6.00 V	4.78 V	21.4 V	-0.85 V	2.00 V	0.540 V	0.650 V	0.400 V	0.26 V	10.3 V	N	7.0 V	1.150 V
7/25/1984	7.50 V	4.84 V	32.0 V	-0.62 V	1.90 V	0.510 V	0.590 V	0.330 V	0.15 T	9.7 V	2.5 V	N	1.210 V
8/20/1985	6.00 V	4.94 V	31.0 V	-0.32 V	1.82 V	0.480 V	0.670 V	0.360 V	0.17 T	9.5 V	4.5 V	N	1.100 V
7/15/1986	11.00 V	4.98 V	29.0 V	-0.40 V	1.78 V	0.490 V	0.610 V	0.340 V	0.40 V	10.1 V	1.0 T	N	1.240 V
7/14/1987	11.20 V	5.03 V	28.5 V	-0.25 V	1.90 V	0.420 V	0.660 V	0.310 V	0.25 V	8.5 V	0.5 T	N	1.180 V
7/21/1988	10.50 V	4.98 V	29.0 V	-0.29 V	1.80 V	0.540 V	0.580 V	0.310 V	O	9.0 V	3.0 V	N	1.200 V
7/19/1989	7.60 V	4.89 V	28.5 V	-0.54 V	1.80 V	0.500 V	0.620 V	0.310 V	0.20 W	9.3 V	4.0 V	N	1.460 V
7/25/1990	11.20 V	4.98 V	27.6 V	-0.43 V	1.60 V	0.440 V	0.640 V	0.300 V	0.20 W	8.7 V	3.0 V	N	1.300 V
7/08/1991	9.50 V	5.09 V	26.1 V	-0.30 C	1.50 V	0.480 V	0.520 V	0.300 V	0.20 W	8.3 V	2.0 V	N	1.260 V
7/06/1992	7.25 V	5.02 V	26.1 V	-0.54 C	1.65 V	0.480 V	0.600 V	0.270 V	0.20 T	8.8 V	1.5 V	N	1.160 V
7/07/1993	6.20 V	4.99 V	25.8 V	-0.37 V	1.45 V	0.430 V	0.580 V	0.257 V	0.20 W	8.1 V	2.6 V	N	1.240 V
7/04/1994	7.00 V	5.06 V	24.8 V	-0.27 V	1.50 V	0.440 V	0.650 V	0.274 V	0.20 W	8.1 V	1.6 V	N	1.200 V
7/24/1995	N	4.92 V	22.0 V	-0.80 C	1.35 V	0.400 V	0.600 V	0.240 V	0.20 T	7.5 V	0.4 T	N	1.220 V
7/08/1996	N	5.05 V	23.0 V	0.07 C	1.40 V	0.420 V	0.600 V	0.250 V	0.20 W	7.0 V	3.2 V	N	1.220 V
7/21/1997	N	5.18 V	21.1 V	-0.18 V	1.30 V	0.395 V	0.555 V	0.235 V	0.14 V	6.6 V	4.2 V	N	1.300 V
7/28/1998	N	5.12 V	20.9 V	0.48 V	1.30 V	0.400 V	0.600 V	0.250 V	0.20 W	6.5 V	N	N	1.160 V
7/19/1999	N	5.33 V	20.2 V	-0.11 V	1.15 V	0.380 V	0.640 V	0.240 V	0.20 W	6.5 V	N	N	1.120 V
7/24/2000	N	5.29 V	20.4 V	-0.15 V	1.25 V	0.380 V	0.640 V	0.240 V	0.20 W	7.0 V	N	N	1.160 V
6/25/2001	N	4.75 V	20.8 V	-0.10 V	1.05 V	0.360 V	0.620 V	0.230 V	0.40 T	6.5 V	N	N	1.240 V
6/24/2002	N	5.10 V	20.2 V	-0.32 V	1.10 V	0.340 V	0.595 V	0.225 V	0.21 V	5.9 V	N	N	1.360 V
7/30/2003	7.50 V	5.23 V	23.6 V	-0.14 V	1.08 V	0.340 V	0.595 V	0.240 V	0.12 V	5.7 V	N	N	0.940 V
7/19/2004	4.70 V	5.17 V	17.4 V	-0.23 V	1.06 V	0.335 V	0.630 V	0.225 V	0.19 V	4.7 V	N	N	1.420 V
7/20/2005	10.00 V	5.58 V	16.0 V	N	1.08 V	0.370 V	0.600 V	0.215 V	0.21 V	5.5 V	N	N	0.780 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
7/09/1981	0.0200 V	0.3040 V	0.2800 V	0.0010 V	0.0030 V	0.0080 V	0.0030 V	0.12 V	0.020 V	0.046 C	1.9 V	0.2 0 V
8/03/1983	0.0200 V	0.2250 V	0.2000 V	0.0010 V	0.0020 V	0.0140 V	N	N	N	N	N	N
7/25/1984	0.0550 V	0.1900 V	0.2400 V	0.0010 L	0.0030 V	0.0080 V	N	N	N	N	N	N
8/20/1985	0.0340 V	0.2400 V	0.1800 V	0.0010 V	0.0030 V	0.0110 V	N	N	N	N	N	N
7/15/1986	0.1900 V	0.2200 V	0.2600 V	0.0010 V	0.0020 V	0.0100 V	N	N	N	N	N	N
7/14/1987	0.0590 V	0.2200 V	0.1700 V	0.0010 W	0.0020 V	0.0120 V	N	N	N	N	N	N
7/21/1988	0.0280 T	0.2100 V	0.2000 V	0.0009 T	0.0030 T	0.0063 V	N	N	N	N	1.2 V	N
7/19/1989	0.0480 T	0.1900 V	0.2300 V	0.0012 T	0.0030 T	0.0074 V	N	N	N	N	1.4 V	N
7/25/1990	0.0300 T	0.1700 V	0.2000 V	0.0005 W	O	0.0080 V	N	N	N	N	1.6 V	0.20 W
7/08/1991	0.0300 T	0.1700 V	0.1900 V	0.0010 T	0.0020 W	0.0080 V	0.0020 T	0.08 T	0.008 T	0.005 T	1.2 V	0.20 W
7/06/1992	0.1500 V	0.1300 V	0.1800 V	0.0005 W	0.0020 W	0.0050 V	0.0030 T	0.08 T	0.006 T	0.005 W	1.2 V	0.20 W
7/07/1993	0.0380 T	0.1400 V	0.2000 V	0.0014 T	0.0020 W	0.0058 V	0.0040 T	0.10 V	0.008 T	0.010 T	1.1 V	0.20 W
7/04/1994	0.0440 T	0.1700 V	0.2100 V	0.0012 T	0.0030 T	0.0069 V	0.0020 T	0.12 V	0.012 V	0.005 T	1.4 V	0.20 W
7/24/1995	0.0200 V	0.1200 V	0.1700 V	0.0014 V	0.0015 V	0.0050 V	O	0.08 T	0.014 V	O	1.0 V	0.20 W
7/08/1996	0.0400 T	0.1400 V	0.1800 V	0.0012 V	0.0020 T	0.0045 V	0.0020 W	0.12 V	0.010 V	0.005 W	0.9 V	0.20 W
7/21/1997	0.0412 V	0.1360 V	0.1470 V	0.0008 V	0.0027 V	0.0048 V	0.0035 V*	0.12 V	0.008 V	0.002 W	1.2 V	0.26 V
7/28/1998	0.0169 V	0.1200 V	0.0915 V	0.0008 D	0.0018 V	0.0045 V	0.0020 W	0.14 V	0.004 T	0.005 W	0.9 V	0.20 W
7/19/1999	0.0209 V	0.0926 V	0.0756 V	0.0008 D	0.0017 V	0.0035 V	0.0020 W	0.08 T	O	0.005 W	0.9 V	0.40 T
7/24/2000	0.0095 V	0.0864 V	0.0790 V	0.0008 D	0.0015 D	0.0039 V	0.0040 T	0.08 T	0.004 T	0.005 W	1.2 V	0.20 W
6/25/2001	0.0208 V	0.0990 V	0.1110 V	0.0008 D	0.0017 V	0.0037 V	0.0020 W	0.14 V	0.002 W	0.005 W	1.5 V	0.20 W
6/24/2002	0.0320 V	0.1060 V	0.1520 V	0.0008 D	0.0015 D	0.0037 V	0.0041 V*	0.12 V	0.020 V	0.004 T	1.9 V	0.22 V
7/30/2003	0.0171 V	0.0779 V	0.1040 V	0.0008 D	0.0015 D	0.0047 V	0.0027 V*	0.14 V	0.014 V	0.002 W	1.8 V	0.16 V
7/19/2004	0.0190 V	0.0668 V	0.1150 V	0.0008 D	0.0015 D	0.0029 V	0.0025 V*	0.10 V	0.008 T	0.002 W	1.9 V	0.24 V
7/20/2005	0.0301 V	0.0693 V	0.0684 V	0.0008 D	0.0015 D	0.0029 V	0.0027 V*	0.10 V	0.008 T	0.006 T	1.3 V	0.28 V

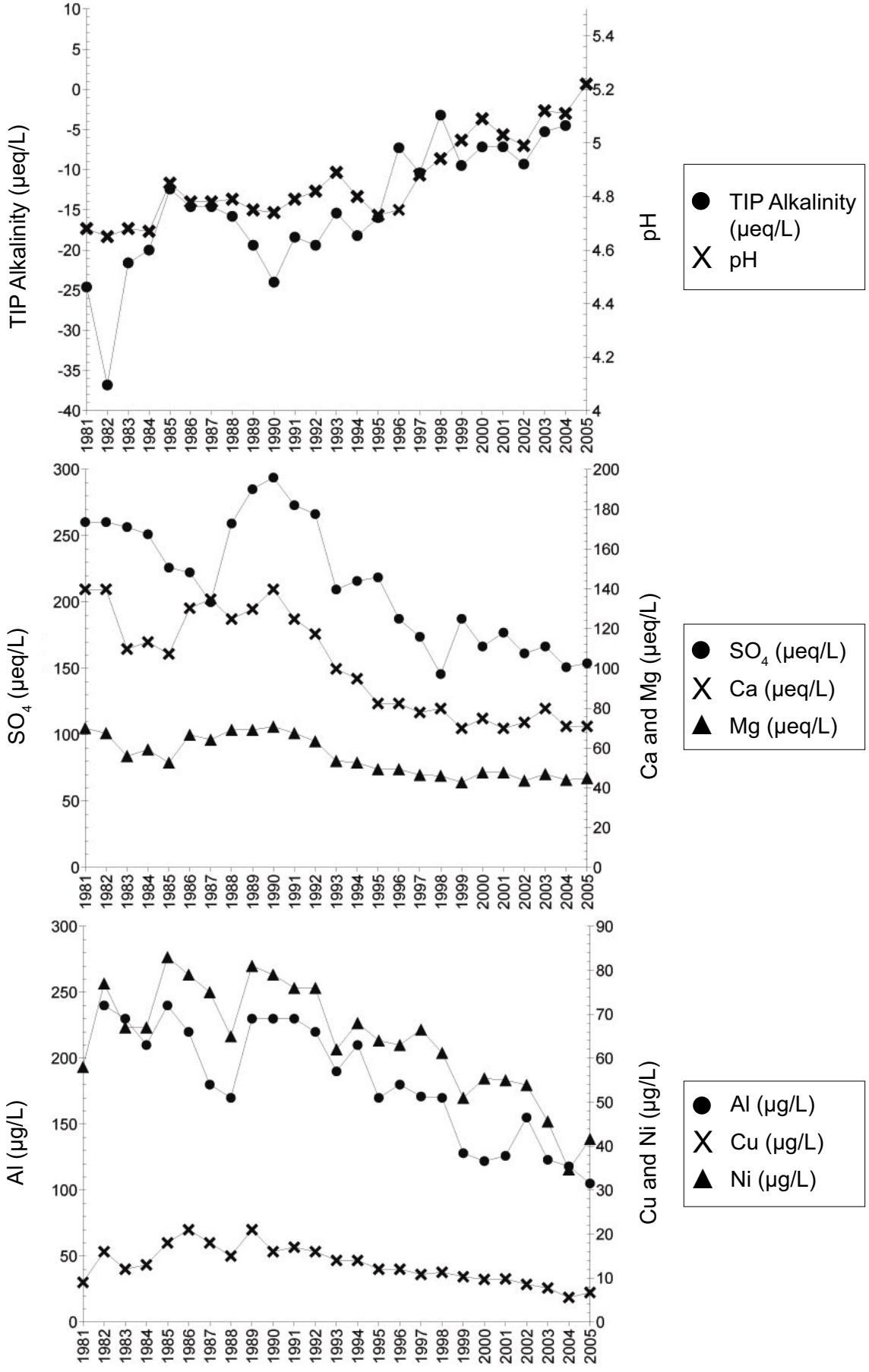
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Wavy Lake



SES ID #	10	**Shoreline length (km)**	22.34
Township	Eden	**Maximum depth (m)**	34.0
Latitude	46°17’	**Mean depth (m)**	15.0
Longitude	81°06’	**Volume (x 10^4 m^3)**	3827
Distance from Sudbury (km)	22	**Area (ha)**	306.31
Elevation (m)	267	**Road access**	Yes
Watershed code	2CF05		

Wavy Lake


TIP Alkalinity (µeq/L)
pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

WAVY SES # 10

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
6/15/1981	7.80 V	4.68 V	41.0 V	-1.23 V	2.80 V	0.850 V	1.000 V	0.450 V	0.60 V	12.5 V	N	2.2 V	1.600 V
7/06/1982	7.50 V	4.65 V	41.0 V	-1.84 V	2.80 V	0.820 V	N	N	N	12.5 V	N	4.7 V	N
7/07/1983	5.50 V	4.68 V	37.2 V	-1.08 V	2.20 V	0.680 V	0.750 V	0.380 V	0.23 V	12.3 V	N	12.1 V	1.480 V
7/18/1984	5.00 V	4.67 V	40.1 V	-1.00 V	2.27 V	0.720 V	0.780 V	0.330 V	0.46 V	12.1 V	4.0 V	N	1.440 V
7/11/1985	6.50 V	4.85 V	38.0 V	-0.62 V	2.15 V	0.640 V	0.800 V	0.410 V	0.35 V	10.9 V	8.5 V	N	1.550 V
7/03/1986	9.00 V	4.78 V	38.0 V	-0.73 V	2.61 V	0.810 V	0.760 V	0.350 V	0.25 V	10.7 V	1.5 T	N	1.440 V
7/22/1987	13.00 V	4.78 V	37.0 V	-0.73 V	2.70 V	0.780 V	0.820 V	0.360 V	0.30 V	9.6 V	3.0 V	N	1.420 V
7/14/1988	8.20 V	4.79 V	40.2 V	-0.79 V	2.50 V	0.840 V	0.860 V	0.380 V	0.50 T	12.5 V	3.0 V	N	1.620 V
7/17/1989	8.20 V	4.75 V	42.0 V	-0.97 V	2.60 V	0.840 V	0.900 V	0.370 V	0.30 T	13.7 V	5.0 V	N	1.980 V
7/17/1990	11.50 V	4.74 V	44.2 V	-1.20 V	2.80 V	0.860 V	0.920 V	0.390 V	0.20 T	14.1 V	3.0 V	N	1.820 V
7/11/1991	11.10 V	4.79 V	41.2 V	-0.92 C	2.50 V	0.820 V	0.900 V	0.370 V	0.20 W	13.1 V	3.0 V	N	1.840 V
7/07/1992	9.00 V	4.82 V	39.2 V	-0.97 C	2.35 V	0.770 V	0.890 V	0.380 V	0.50 T	12.8 V	4.0 V	N	1.880 V
7/14/1993	7.00 V	4.89 V	34.6 V	-0.77 V	2.00 V	0.650 V	0.860 V	0.337 V	0.30 T	10.1 V	9.2 V	N	1.920 V
7/27/1994	5.00 V	4.80 V	33.9 V	-0.91 V	1.90 V	0.640 V	0.830 V	0.358 V	0.20 T	10.4 V	6.6 V	N	1.740 V
7/10/1995	N	4.73 V	30.0 V	-0.80 C	1.65 V	0.600 V	0.840 V	0.330 V	0.40 T	10.5 V	6.2 V	N	1.640 V
7/02/1996	N	4.75 V	29.0 V	-0.36 C	1.65 V	0.600 V	0.960 V	0.420 V	0.40 T	9.0 V	6.0 V	N	1.420 V
7/14/1997	N	4.88 V	29.7 V	-0.52 V	1.56 V	0.565 V	0.830 V	0.295 V	0.28 V	8.4 V	6.4 V	N	1.440 V
7/07/1998	N	4.94 V	38.2 V	-0.16 V	1.60 V	0.560 V	0.760 V	0.310 V	0.40 T	7.0 V	N	N	1.280 V
7/14/1999	N	5.01 V	28.1 V	-0.47 V	1.40 V	0.520 V	0.800 V	0.290 V	0.40 T	9.0 V	N	N	O
7/18/2000	N	5.09 V	27.5 V	-0.36 V	1.50 V	0.580 V	0.840 V	0.340 V	0.20 W	8.0 V	N	N	0.820 V
7/03/2001	N	5.03 V	27.8 V	-0.36 V	1.40 V	0.580 V	0.860 V	0.340 V	0.40 T	8.5 V	N	N	1.000 V
6/25/2002	5.00 V	4.99 V	27.5 V	-0.47 V	1.46 V	0.530 V	0.840 V	0.270 V	0.39 V	7.8 V	N	N	1.360 V
7/31/2003	5.60 V	5.12 V	O	-0.26 V	1.60 V	0.570 V	0.900 V	0.320 V	0.21 V	8.0 V	N	N	0.820 V
7/06/2004	6.70 V	5.11 V	23.0 V	-0.22 V	1.42 V	0.535 V	0.820 V	0.305 V	0.35 V	7.3 V	N	N	1.360 V
6/27/2005	6.25 V	5.22 V	22.6 V	N	1.42 V	0.545 V	0.850 V	0.300 V	0.30 V	7.4 V	N	N	1.340 V

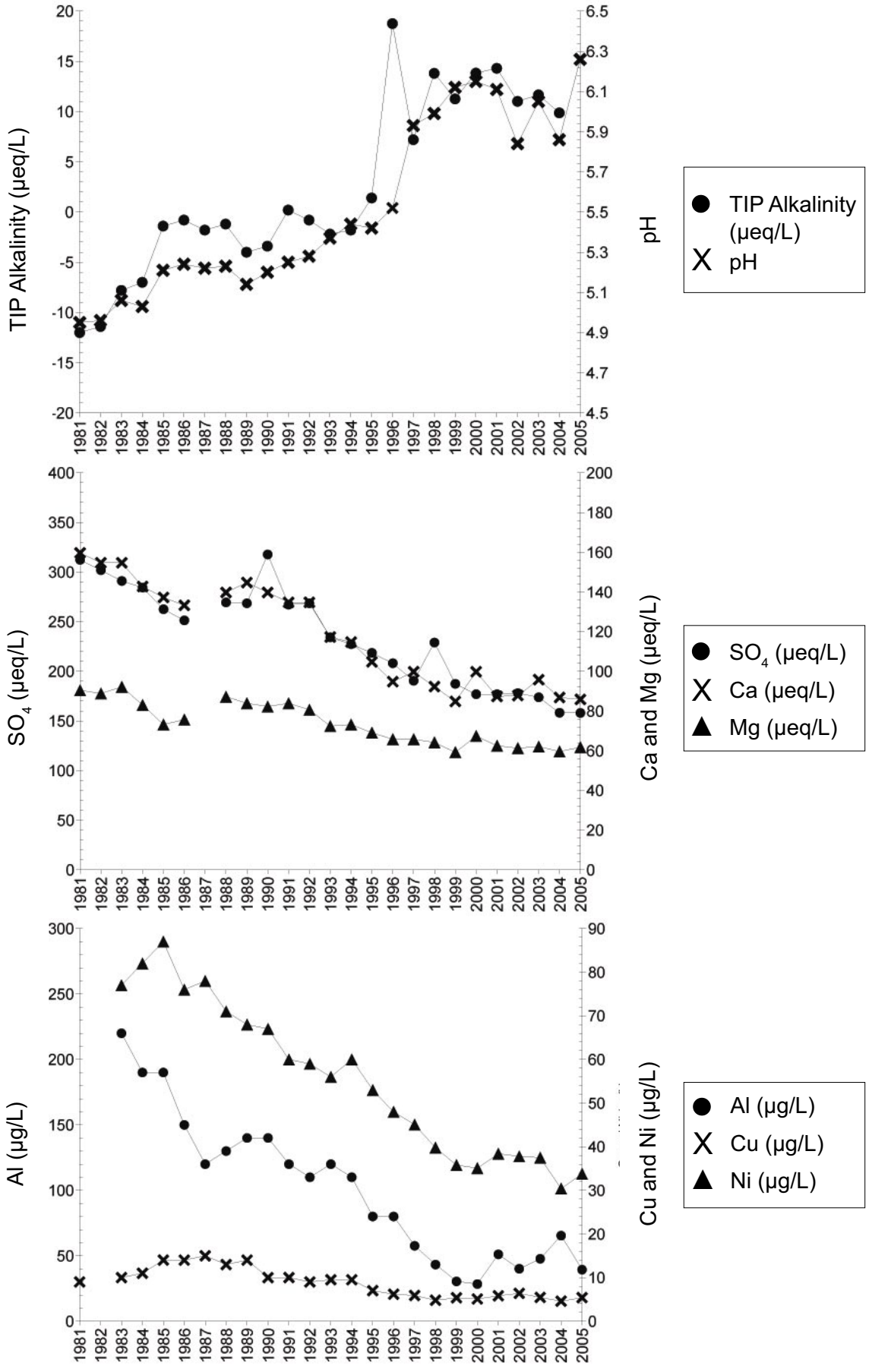
DATE	Fe (mg/L)	Mn (mg/L)	Al (mg /L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	$NH_3 + NH_4$ (mg/L)	$NO_2 + NO_3$ (mg/L)	DOC (mg/L)	DIC (mg/L)
6/15/1981	0.1000 V	0.1580 V	O	0.0090 V	0.0580 V	0.0100 V	0.0050 V	0.18 V	N	N	1.7 V	0.80 V
7/06/1982	0.1500 V	0.1750 V	0.2400 V	0.0160 V	0.0770 V	0.0160 V	N	N	N	N	N	N
7/07/1983	0.1150 V	0.1450 V	0.2300 V	0.0120 V	0.0670 V	0.0160 V	N	N	N	N	N	N
7/18/1984	0.1150 V	0.1460 V	0.2100 V	0.0130 V	0.0670 V	0.0160 V	N	N	N	N	N	N
7/11/1985	0.1900 V	0.1500 V	0.2400 V	0.0180 V	0.0830 V	0.0200 V	N	N	N	N	N	N
7/03/1986	0.0900 V	0.1400 V	0.2200 V	0.0210 V	0.0790 V	0.0150 V	N	N	N	N	N	N
7/22/1987	0.0760 V	0.1500 V	0.1800 V	0.0180 V	0.0750 V	0.0060 V	0.0040 T	0.06 T	0.024 V	0.125 V	N	N
7/14/1988	0.1400 V	0.1300 V	0.1700 V	0.0150 V	0.0650 V	0.0110 V	N	N	N	N	1.2 V	N
7/17/1989	0.1200 V	0.1600 V	0.2300 V	0.0210 V	0.0810 V	0.0170 V	N	N	N	N	1.2 V	N
7/17/1990	0.0900 T	0.1600 V	0.2300 V	0.0160 V	0.0790 V	0.0170 V	N	N	N	N	0.9 V	0.40 T
7/11/1991	0.0900 T	0.1600 V	0.2300 V	0.0170 V	0.0760 V	0.0180 V	0.0060 T	0.15 V	0.026 V	0.105 V	1.4 V	0.20 W
7/07/1992	0.0960 T	0.1400 V	0.2200 V	0.0160 V	0.0760 V	0.0160 V	0.0050 T	0.15 V	0.042 V	0.095 V	1.6 V	0.20 W
7/14/1993	0.1400 V	0.1100 V	0.1900 V	0.0140 V	0.0620 V	0.0110 V	0.0100 V	0.18 V	0.030 V	0.110 V	2.3 V	0.20 T
7/27/1994	0.1600 V	0.1300 V	0.2100 V	0.0140 V	0.0680 V	0.0140 V	0.0040 T	0.18 V	0.036 V	0.100 V	2.0 V	0.20 T
7/10/1995	0.1200 V	0.1200 V	0.1700 V	0.0120 V	0.0640 V	0.0120 V	0.0020 W	0.16 V	0.010 V	0.100 V	1.9 V	0.20 W
7/02/1996	0.1200 V	0.1100 V	0.1800 V	0.0120 V	0.0630 V	0.0160 V	0.0040 T	0.28 V	0.062 V	0.110 V	1.9 V	0.20 W
7/14/1997	0.0980 V	0.1160 V	0.1710 V	0.0108 V	0.0665 V	0.0117 V	0.0021 V*	0.14 V	0.034 V	0.096 V	1.9 V	0.24 V
7/07/1998	0.1320 V	0.1100 V	0.1700 V	0.0113 V	0.0612 V	0.0114 V	0.0040 T	0.20 V	0.006 T	0.075 V	2.2 V	0.20 W
7/14/1999	0.0977 V	0.0964 V	0.1280 V	0.0103 V	0.0510 V	0.0089 V	0.0040 T	0.16 V	0.002 W	0.080 V	2.1 V	0.60 T
7/18/2000	0.0646 V	0.1030 V	0.1220 V	0.0097 V	0.0554 V	0.0101 V	0.0040 T	0.16 V	0.010 V	0.063 V	2.5 V	0.80 T
7/03/2001	0.0986 V	0.1060 V	0.1260 V	0.0098 V	0.0550 V	0.0095 V	0.0040 T	0.16 V	0.014 V	0.065 V	3.0 V	0.40 T
6/25/2002	0.1050 V	0.0911 V	0.1550 V	0.0086 V	0.0539 V	0.0089 V	0.0075 V*	0.18 V	0.028 V	0.060 V	2.7 V	0.18 V
7/31/2003	0.0997 V	0.0833 V	0.1230 V	0.0077 V	0.0456 V	0.0089 V	0.0033 V*	0.19 V	0.024 V	0.052 V	2.5 V	0.28 V
7/06/2004	0.0738 V	0.0600 V	0.1180 V	0.0056 V	0.0347 V	0.0065 V	0.0037 V*	0.14 V	0.030 V	0.014 V	2.2 V	0.36 V
6/27/2005	0.0720 V	0.0686 V	0.1050 V	0.0067 V	0.0416 V	0.0073 V	0.0032 V*	0.17 V	0.014 V	0.016 V	2.6 V	0.22 V

C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

White Oak Lake

SES ID #	208	**Shoreline length (km)**	17.79
Township	Tilton	**Maximum depth (m)**	43.0
Latitude	46°17’	**Mean depth (m)**	14.5
Longitude	81°00’	**Volume (x 10^4 m^3)**	3853
Distance from Sudbury (km)	22	**Area (ha)**	273.13
Elevation (m)	233	**Road access**	No
Watershed code	2DB02		

White Oak Lake



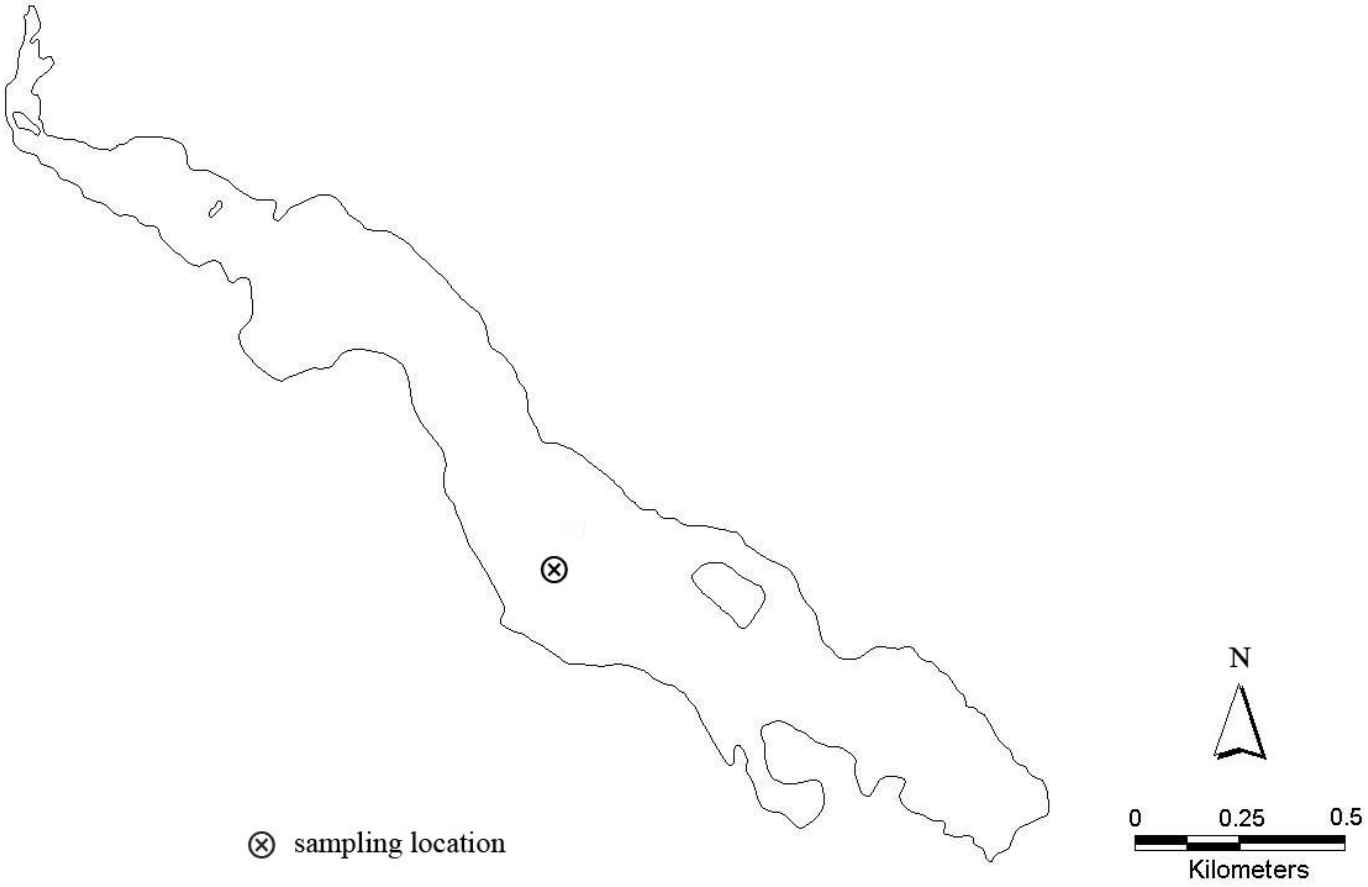
WHITE OAK SES # 208

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
6/15/1981	9.10 V	4.95 V	46.0 V	-0.60 V	3.20 V	1.100 V	0.900 V	0.500 V	0.60 V	15.0 V	N	0.9 V	1.850 V
7/06/1982	8.50 V	4.96 V	45.0 V	-0.57 V	3.10 V	1.080 V	N	N	N	14.5 V	N	3.3 V	N
7/07/1983	8.50 V	5.06 V	43.9 V	-0.39 V	3.10 V	1.120 V	0.950 V	0.460 V	0.36 V	14.0 V	N	10.1 V	1.780 V
7/18/1984	8.00 V	5.03 V	42.8 V	-0.35 V	2.86 V	1.010 V	0.900 V	0.400 V	0.55 V	13.7 V	2.0 V	N	1.640 V
7/11/1985	10.00 V	5.21 V	41.0 V	-0.07 V	2.75 V	0.890 V	1.170 V	0.490 V	0.73 V	12.6 V	3.5 V	N	1.680 V
7/03/1986	9.00 V	5.24 V	39.0 V	-0.04 V	2.67 V	0.920 V	0.900 V	0.420 V	0.30 V	12.1 V	2.0 V	N	1.580 V
7/22/1987	10.00 V	5.22 V	38.5 V	-0.09 V	N	N	N	N	N	N	N	N	N
7/14/1988	7.70 V	5.23 V	39.5 V	-0.06 V	2.80 V	1.060 V	0.960 V	0.450 V	0.70 T	12.9 V	2.5 V	N	1.400 V
7/17/1989	8.30 V	5.14 V	39.7 V	-0.20 V	2.90 V	1.020 V	1.000 V	0.440 V	0.40 T	12.9 V	3.0 V	N	1.620 V
7/17/1990	9.50 V	5.20 V	40.2 V	-0.17 V	2.80 V	1.000 V	1.040 V	0.470 V	0.40 T	15.3 V	3.0 V	N	1.440 V
7/11/1991	7.60 V	5.25 V	38.8 V	0.01 C	2.70 V	1.020 V	1.000 V	0.470 V	0.20 T	12.8 V	2.5 V	N	1.360 V
7/07/1992	10.00 V	5.28 V	37.6 V	-0.04 C	2.70 V	0.980 V	1.000 V	0.460 V	0.50 T	12.9 V	3.5 V	N	1.520 V
7/14/1993	7.50 V	5.37 V	34.5 V	-0.11 V	2.35 V	0.880 V	0.940 V	0.397 V	0.40 T	11.3 V	4.6 V	N	1.640 V
7/27/1994	5.50 V	5.44 V	33.4 V	-0.09 V	2.30 V	0.890 V	0.940 V	0.405 V	0.30 T	10.9 V	3.6 V	N	1.540 V
7/10/1995	N	5.42 V	33.0 V	0.07 C	2.10 V	0.840 V	0.940 V	0.400 V	0.40 T	10.5 V	5.6 V	N	1.640 V
7/08/1996	N	5.52 V	32.0 V	0.94 C	1.90 V	0.800 V	0.960 V	0.410 V	0.40 T	10.0 V	5.0 V	N	1.720 V
7/15/1997	N	5.93 V	29.0 V	0.36 V	2.00 V	0.800 V	0.880 V	0.380 V	0.43 V	9.2 V	5.2 V	N	1.760 V
7/13/1998	N	5.99 V	27.6 V	0.69 V	1.85 V	0.780 V	0.880 V	0.390 V	0.40 T	11.0 V	N	N	1.600 V
7/13/1999	N	6.12 V	28.5 V	0.56 V	1.70 V	0.720 V	0.900 V	0.360 V	0.40 T	9.0 V	N	N	O
7/18/2000	N	6.15 V	28.6 V	0.69 V	2.00 V	0.820 V	0.980 V	0.420 V	0.40 T	8.5 V	N	N	1.500 V
7/03/2001	N	6.11 V	28.4 V	0.72 V	1.75 V	0.760 V	0.980 V	0.430 V	0.40 T	8.5 V	N	N	1.540 V
7/09/2002	N	5.84 V	26.8 V	0.55 V	1.76 V	0.745 V	0.950 V	0.365 V	0.54 V	8.6 V	N	N	1.400 V
7/16/2003	6.30 V	6.05 V	24.6 V	0.58 V	1.92 V	0.755 V	0.990 V	0.410 V	0.46 V	8.4 V	N	N	1.260 V
7/06/2004	5.30 V	5.86 V	24.4 V	0.49 V	1.74 V	0.725 V	0.880 V	O	0.46 V	7.6 V	N	N	1.580 V
7/04/2005	4.50 V	6.26 V	25.4 V	N	1.72 V	0.750 V	0.955 V	0.425 V	0.47 V	7.6 V	N	N	1.460 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
6/15/1981	0.0600 V	0.1280 V	O	0.0090 V	O	0.0130 V	0.0110 V	0.15 V	N	0.091 C	1.8 V	0.40 V
7/06/1982	0.0650 V	0.1260 V	N	N	N	N	N	N	N	N	N	N
7/07/1983	0.0650 V	0.1040 V	0.2200 V	0.0100 V	0.0770 V	0.0160 V	N	N	N	N	N	N
7/18/1984	0.0700 V	0.1000 V	0.1900 V	0.0110 V	0.0820 V	0.0150 V	N	N	N	N	N	N
7/11/1985	0.0680 V	0.1000 V	0.1900 V	0.0140 V	0.0870 V	0.0210 V	N	N	N	N	N	N
7/03/1986	0.0480 V	0.0850 V	0.1500 V	0.0140 V	0.0760 V	0.0120 V	N	N	N	N	N	N
7/22/1987	0.0490 V	0.0770 V	0.1200 V	0.0150 V	0.0780 V	0.0060 V	N	N	N	N	N	N
7/14/1988	0.0510 T	0.0720 V	0.1300 V	0.0130 V	0.0710 V	0.0120 V	N	N	N	N	1.8 V	N
7/17/1989	0.0380 T	0.0760 V	0.1400 V	0.0140 V	0.0680 V	0.0120 V	N	N	N	N	1.6 V	N
7/17/1990	0.0300 T	0.0760 V	0.1400 V	0.0100 V	0.0670 V	0.0130 V	N	N	N	N	1.8 V	0.60 T
7/11/1991	0.0300 T	0.0730 V	0.1200 V	0.0100 V	0.0600 V	0.0120 V	0.0020 W	0.17 V	0.010 V	0.040 V	1.8 V	0.20 W
7/07/1992	0.0660 T	0.0620 V	0.1100 V	0.0090 V	0.0590 V	0.0110 V	0.0050 T	0.17 V	0.032 V	0.035 V	2.2 V	0.20 W
7/14/1993	0.0440 T	0.0560 V	0.1200 V	0.0095 V	0.0560 V	0.0088 V	0.0040 T	0.18 V	0.018 V	0.045 V	2.3 V	0.20 T
7/27/1994	0.0530 T	0.0600 V	0.1100 V	0.0095 V	0.0600 V	0.0110 V	0.0040 T	0.16 V	0.012 V	0.030 V	2.3 V	0.20 W
7/10/1995	0.0400 T	0.0530 V	0.0800 T	0.0070 V	0.0530 V	0.0090 V	0.0020 W	0.16 V	0.010 V	0.020 T	2.4 V	0.20 W
7/08/1996	0.0600 T	0.0540 V	0.0800 T	0.0062 V	0.0480 V	0.0080 V	0.0040 T	0.20 V	0.016 V	0.005 W	2.1 V	0.20 W
7/15/1997	0.0317 V	0.0462 V	0.0576 V	0.0059 V	0.0451 V	0.0069 V	0.0036 V*	0.22 V	0.016 V	0.028 V	2.2 V	0.14 V
7/13/1998	0.0345 V	0.0398 V	0.0433 V	0.0048 V	0.0398 V	0.0069 V	0.0020 W	0.20 V	0.004 T	0.010 T	2.5 V	0.20 W
7/13/1999	0.0365 V	0.0413 V	0.0304 V	0.0054 V	0.0358 V	0.0057 V	0.0040 T	0.18 V	0.002 W	0.015 T	2.6 V	0.40 T
7/18/2000	0.0225 V	0.0407 V	0.0284 V	0.0051 V	0.0351 V	0.0058 V	0.0020 W	0.18 V	0.012 V	0.005 W	2.5 V	0.20 W
7/03/2001	0.0374 V	0.0385 V	0.0511 V	0.0058 V	0.0384 V	0.0058 V	0.0080 T	0.24 V	0.012 V	0.020 T	3.0 V	0.60 T
7/09/2002	0.0226 V	0.0478 V	0.0401 V	0.0064 V	0.0378 V	0.0072 V	0.0078 V*	0.30 V	0.032 V	0.036 V	2.6 V	0.16 V
7/16/2003	0.0301 V	0.0370 V	0.0477 V	0.0055 V	0.0375 V	0.0075 V	0.0049 V*	0.21 V	0.040 V	0.008 T	3.2 V	0.34 V
7/06/2004	0.0702 V	0.0395 V	0.0654 V	0.0046 V	0.0304 V	0.0046 V	0.0041 V*	0.12 V	0.014 V	0.054 V	2.8 V	0.44 V
7/04/2005	0.0350 V	0.0422 V	0.0394 V	0.0054 V	0.0338 V	0.0068 V	0.0037 V*	0.18 V	N	N	2.8 V	0.40 V

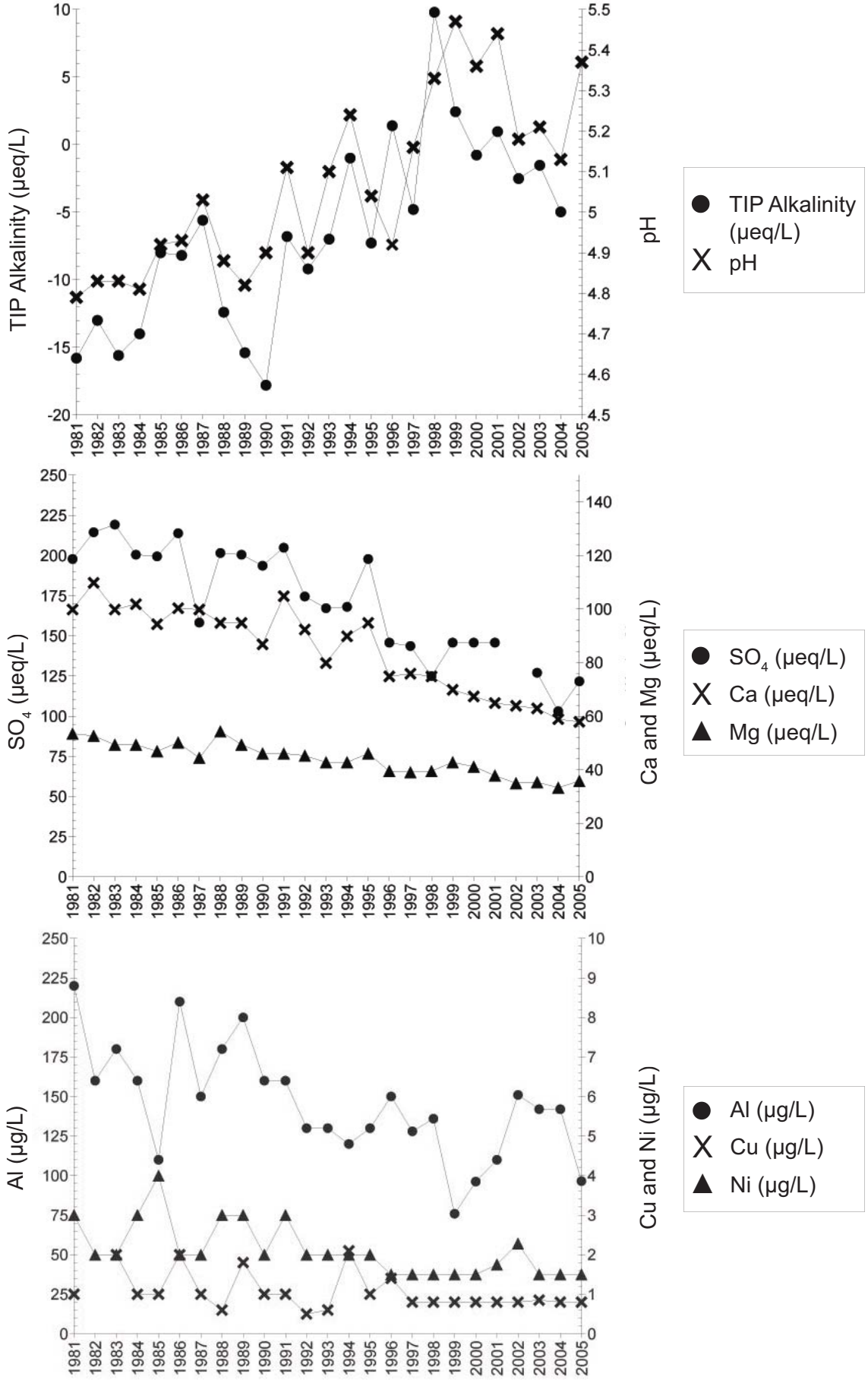
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Whitepine Lake



SES ID #	181	**Shoreline length (km)**	8.47
Township	Gamble	**Maximum depth (m)**	21.3
Latitude	47°23’	**Mean depth (m)**	7.0
Longitude	80°37’	**Volume (x 10^4 m^3)**	592
Distance from Sudbury (km)	106	**Area (ha)**	84.34
Elevation (m)	422	**Road access**	No
Watershed code	2JD04		

Whitepine Lake



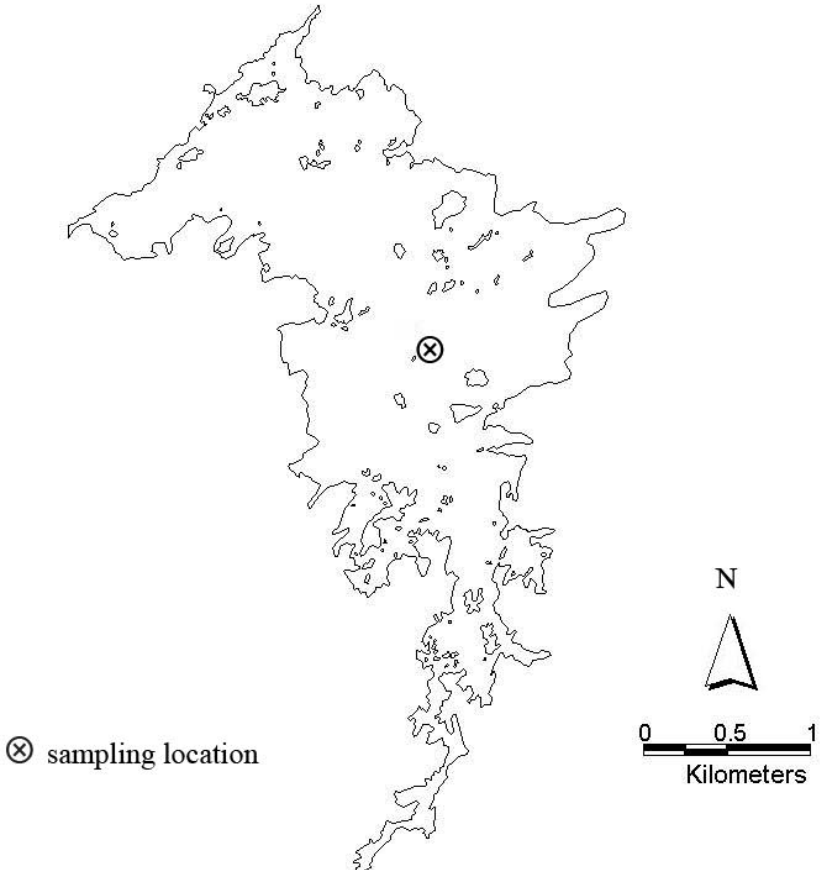
WHITEPINE SES # 181

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/09/1981	6.80 V	4.79 V	33.0 V	-0.79 V	2.00 V	0.650 V	0.700 V	0.400 V	0.35 V	9.5 V	N	7.2 V	1.400 V
7/22/1982	7.00 V	4.83 V	33.0 V	-0.65 V	2.20 V	0.640 V	N	N	N	10.3 V	N	6.1 V	N
8/03/1983	6.00 V	4.83 V	32.2 V	-0.78 V	2.00 V	0.600 V	0.700 V	0.440 V	0.24 V	10.5 V	N	6.7 V	1.510 V
7/25/1984	6.00 V	4.81 V	32.5 V	-0.70 V	2.04 V	0.600 V	0.610 V	0.380 V	0.14 T	9.6 V	7.0 V	N	1.420 V
8/20/1985	4.50 V	4.92 V	31.0 V	-0.40 V	1.89 V	0.570 V	0.580 V	0.390 V	0.09 T	9.6 V	6.0 V	N	1.020 V
7/15/1986	8.00 V	4.93 V	31.0 V	-0.41 V	2.01 V	0.610 V	0.610 V	0.380 V	0.55 V	10.3 V	4.5 V	N	1.380 V
7/14/1987	8.20 V	5.03 V	29.5 V	-0.28 V	2.00 V	0.540 V	0.700 V	0.360 V	0.20 T	7.6 V	4.0 V	N	1.260 V
7/21/1988	6.50 V	4.88 V	31.0 V	-0.62 V	1.90 V	0.660 V	0.680 V	0.380 V	0.70 T	9.7 V	7.0 V	N	1.300 V
7/19/1989	5.90 V	4.82 V	31.5 V	-0.77 V	1.90 V	0.600 V	0.660 V	0.370 V	0.20 W	9.6 V	10.0 V	N	1.760 V
8/02/1990	6.00 V	4.90 V	29.4 V	-0.89 V	1.74 V	0.560 V	0.700 V	0.370 V	0.20 W	9.3 V	8.5 V	N	1.480 V
7/24/1991	7.90 V	5.11 V	26.7 V	-0.34 C	2.10 V	0.560 V	0.620 V	0.350 V	0.50 T	9.8 V	6.5 V	N	1.400 V
7/13/1992	6.10 V	4.90 V	27.1 V	-0.46 C	1.85 V	0.550 V	0.620 V	0.360 V	0.20 T	8.4 V	8.0 V	N	1.500 V
7/29/1993	6.00 V	5.10 V	26.1 V	-0.35 V	1.60 V	0.520 V	0.620 V	0.357 V	0.20 W	8.0 V	7.2 V	N	1.400 V
7/20/1994	5.75 V	5.24 V	24.9 V	-0.05 V	1.80 V	0.520 V	0.620 V	0.361 V	0.20 W	8.1 V	6.0 V	N	1.280 V
7/11/1995	6.50 V	5.04 V	24.0 V	-0.36 C	1.90 V	0.560 V	0.760 V	0.360 V	0.20 W	9.5 V	9.2 V	N	1.380 V
7/16/1996	4.30 V	4.92 V	24.0 V	0.07 C	1.50 V	0.480 V	0.600 V	0.350 V	0.20 W	7.0 V	8.0 V	N	1.380 V
7/21/1997	6.00 V	5.16 V	23.4 V	-0.24 V	1.52 V	0.475 V	0.570 V	0.305 V	0.15 V	6.9 V	10.6 V	N	1.520 V
6/22/1998	4.50 V	5.33 V	23.1 V	0.49 V	1.50 V	0.480 V	0.600 V	0.320 V	0.20 W	6.0 V	N	N	1.440 V
7/19/1999	5.90 V	5.47 V	22.4 V	0.12 V	1.40 V	0.520 V	0.700 V	0.320 V	0.20 W	7.0 V	N	N	1.140 V
7/24/2000	5.75 V	5.36 V	22.3 V	-0.04 V	1.35 V	0.500 V	0.680 V	0.320 V	0.20 W	7.0 V	N	N	1.280 V
7/26/2001	7.00 V	5.44 V	23.5 V	0.05 V	1.30 V	0.460 V	0.700 V	0.330 V	0.20 W	7.0 V	N	N	1.280 V
7/31/2002	5.40 V	5.18 V	21.1 V	-0.13 V	1.28 V	0.425 V	0.610 V	0.285 V	N	N	N	N	1.320 V
7/30/2003	4.30 V	5.21 V	27.2 V	-0.08 V	1.26 V	0.430 V	0.665 V	0.295 V	0.12 V	6.1 V	N	N	1.100 V
7/19/2004	5.20 V	5.13 V	19.2 V	-0.25 V	1.18 V	0.405 V	0.635 V	0.265 V	0.15 V	5.0 V	N	N	1.520 V
7/20/2005	5.75 V	5.37 V	17.0 V	N	1.16 V	0.435 V	0.595 V	0.270 V	0.18 V	5.9 V	N	N	0.540 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
7/09/1981	0.0500 V	0.1300 V	0.2200 V	0.0010 V	0.0030 V	0.0070 V	0.0040 V	0.12 V	0.008 V	0.010 C	1.8 V	0.40 V
7/22/1982	0.0400 T	0.1330 V	0.1600 V	O	0.0020 V	0.0060 V	N	N	N	N	N	N
8/03/1983	0.0300 V	0.1150 V	0.1800 V	0.0020 V	0.0020 V	0.0110 V	N	N	N	N	N	N
7/25/1984	0.0650 V	0.1130 V	0.1600 V	0.0010 L	0.0030 V	0.0070 V	N	N	N	N	N	N
8/20/1985	0.0490 V	0.1200 V	0.1100 V	0.0010 W	0.0040 V	0.0090 V	N	N	N	N	N	N
7/15/1986	0.0640 V	0.1100 V	0.2100 V	0.0020 V	0.0020 V	0.0120 V	N	N	N	N	N	N
7/14/1987	0.0550 V	0.0980 V	0.1500 V	0.0010 W	0.0020 V	0.0120 V	N	N	N	N	N	N
7/21/1988	0.0650 T	0.0980 V	0.1800 V	0.0006 T	0.0030 T	0.0047 V	N	N	N	N	2.1 V	N
7/19/1989	0.0850 T	0.0930 V	0.2000 V	0.0018 T	0.0030 T	0.0069 V	N	N	N	N	2.5 V	N
8/02/1990	0.0600 T	0.0720 V	0.1600 V	0.0010 T	0.0020 W	0.0050 V	0.0050 T	0.17 V	0.002 W	0.005 T	2.8 V	0.20 T
7/24/1991	O	0.0780 V	0.1600 V	0.0010 T	0.0030 T	0.0030 V	0.0030 T	0.15 V	0.008 T	0.005 W	2.3 V	0.20 W
7/13/1992	0.0630 T	0.0770 V	0.1300 V	0.0005 W	0.0020 W	0.0030 V	0.0040 T	0.15 V	0.002 T	0.005 T	3.5 V	0.20 W
7/29/1993	0.0630 T	0.0770 V	0.1300 V	0.0006 T	0.0020 W	0.0039 V	0.0040 T	0.16 V	0.002 T	0.005 W	2.9 V	0.20 W
7/20/1994	0.0760 T	0.0790 V	0.1200 V	0.0021 T	0.0020 W	0.0037 V	0.0020 T	0.14 V	0.022 V	0.010 T	2.7 V	0.20 W
7/11/1995	0.0600 T	0.0680 V	0.1300 V	0.0010 V	0.0020 T	0.0220 V	0.0020 T	0.18 V	0.022 V	0.025 V	3.0 V	0.20 W
7/16/1996	0.0600 T	0.0700 V	0.1500 V	0.0014 V	0.0015 T	0.0120 V	0.0020 W	0.18 V	0.010 V	0.090 V	2.9 V	0.80 T
7/21/1997	0.0512 V	0.0614 V	0.1280 V	0.0008 V	0.0015 D	0.0233 V	0.0035 V*	0.16 V	0.019 V	0.008 T	2.8 V	0.36 V
6/22/1998	0.0822 V	0.0694 V	0.1360 V	0.0008 D	0.0015 D	0.0095 V	0.0080 T	0.18 V	0.004 T	0.005 W	3.0 V	0.60 T
7/19/1999	0.0249 V	0.0483 V	0.0759 V	0.0008 D	0.0015 D	0.0029 V	0.0040 T	0.14 V	0.082 V	0.005 W	2.8 V	0.20 W
7/24/2000	0.0286 V	0.0504 V	0.0962 V	0.0008 D	0.0015 D	0.0037 V	0.0040 T	0.14 V	0.004 T	0.005 W	3.2 V	0.40 T
7/26/2001	0.0302 V	0.0598 V	0.1100 V	0.0008 D	0.0018 V	0.0035 V	0.0040 T	0.16 V	0.012 V	0.005 W	2.5 V	0.40 T
7/31/2002	0.0500 V	0.0638 V	0.1510 V	0.0008 D	0.0023 V	0.0042 V	0.0080 V*	0.18 V	0.036 V	0.006 T	N	0.12 V
7/30/2003	0.0416 V	0.0509 V	0.1420 V	0.0009 V	0.0015 D	0.0037 V	0.0033 V*	0.18 V	0.034 V	0.004 T	3.5 V	0.42 V
7/19/2004	0.0309 V	0.0408 V	0.1420 V	0.0008 D	0.0015 D	0.0028 V	0.0056 V*	0.07 V	0.002 W	0.002 W	3.0 V	0.24 V
7/20/2005	0.0254 V	0.0422 V	0.0965 V	0.0008 D	0.0015 D	0.0031 V	0.0012 V*	0.12 V	0.002 W	0.006 T	2.3 V	0.22 V

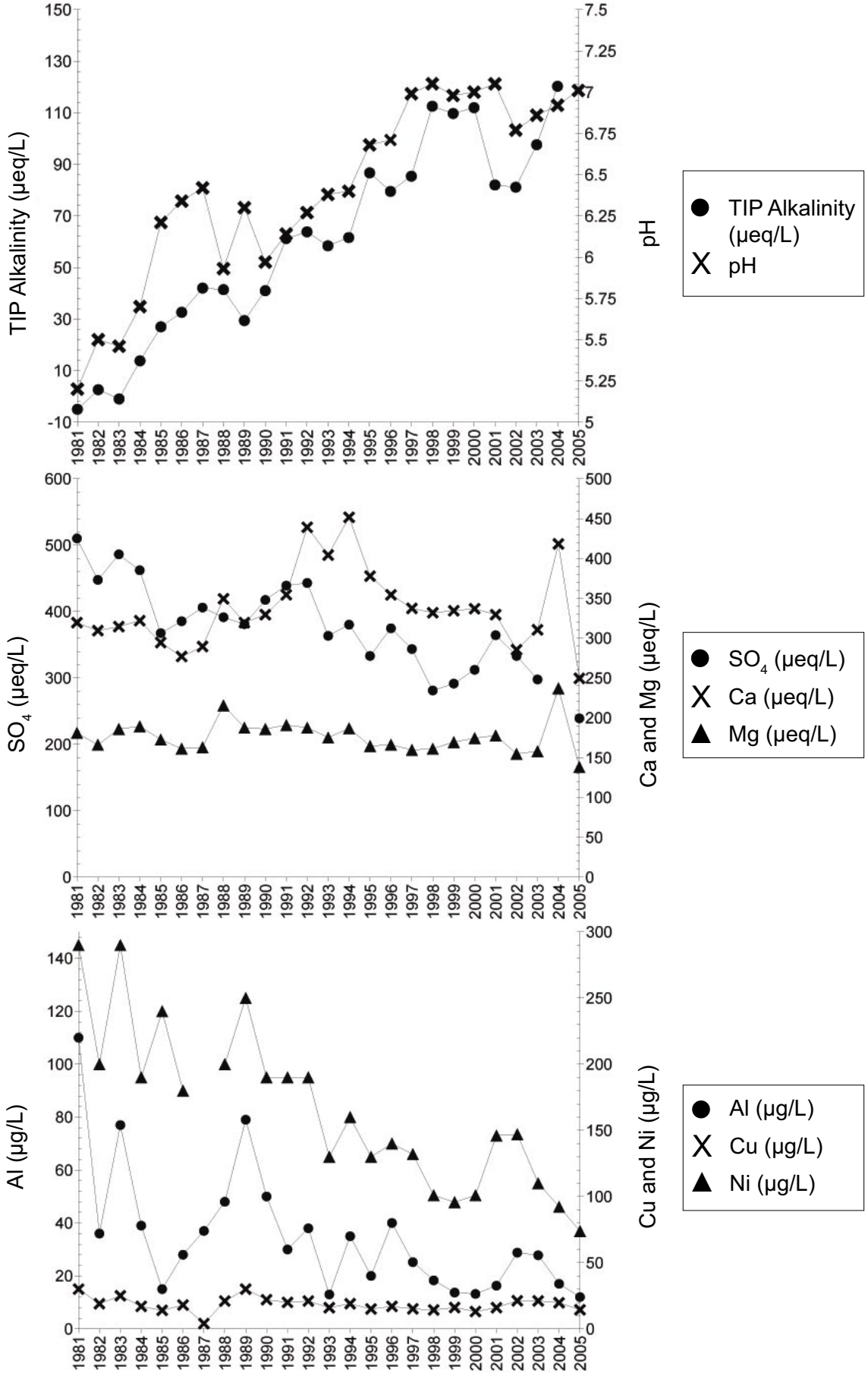
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Whitson Lake



SES ID #	18	**Shoreline length (km)**	30.40
Township	Blezard	**Maximum depth (m)**	16.0
Latitude	46°34’	**Mean depth (m)**	7.3
Longitude	80°58’	**Volume (x 10^4 m^3)**	959
Distance from Sudbury (km)	14	**Area (ha)**	472.28
Elevation (m)	292	**Road access**	Yes
Watershed code	2CF11		

Whitson Lake



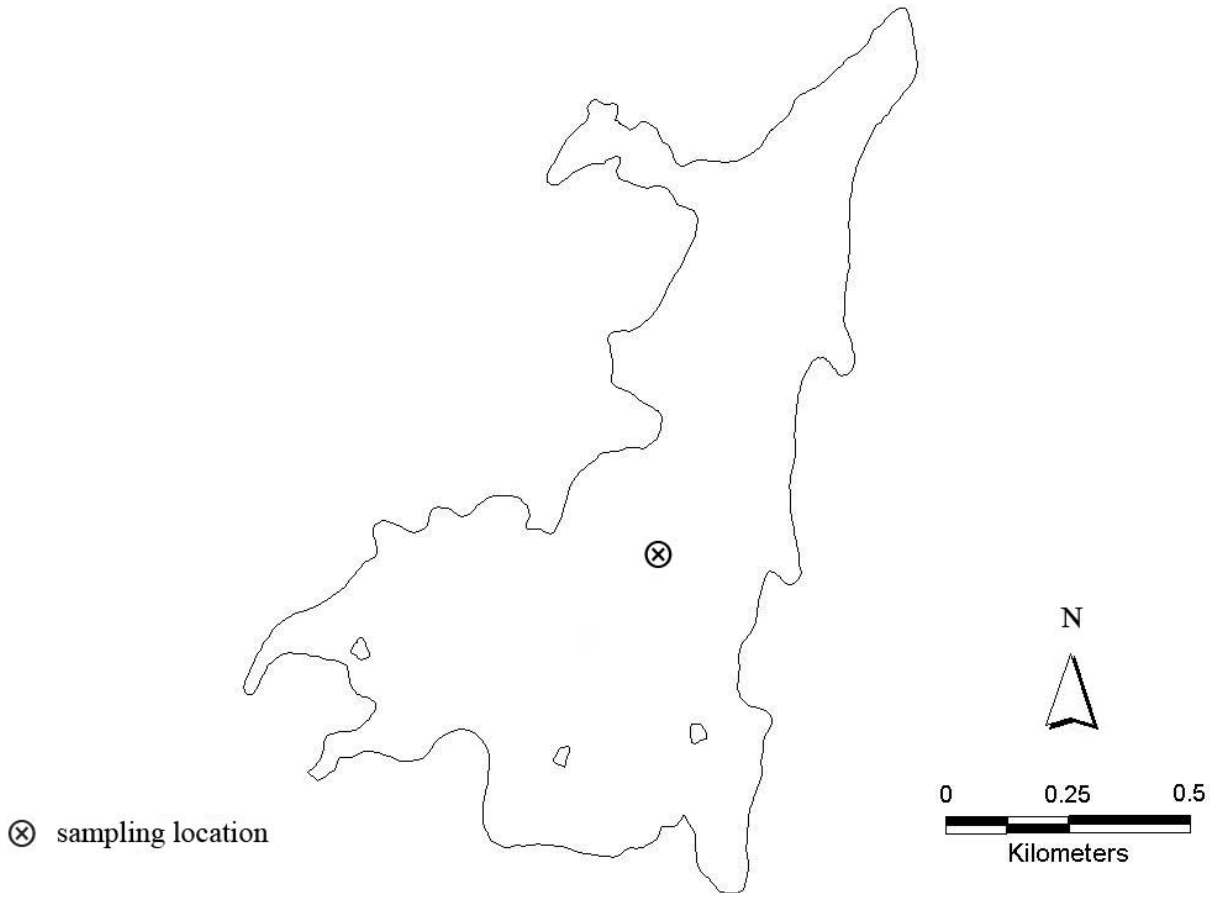
WHITSON SES # 18

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
7/29/1981	6.90 V	5.20 V	120.0 V	-0.25 V	6.40 V	2.200 V	8.600 V	0.900 V	16.50 V	24.5 V	N	O	0.050 V
7/21/1982	5.50 V	5.50 V	109.0 V	0.13 V	6.20 V	2.020 V	N	N	N	21.5 V	N	7.5 V	N
7/13/1983	6.50 V	5.46 V	118.5 V	-0.05 V	6.30 V	2.260 V	8.200 V	0.940 V	17.50 V	23.4 V	N	7.8 V	0.500 V
8/02/1984	5.90 V	5.70 V	119.0 V	0.69 V	6.45 V	2.300 V	9.900 V	0.810 V	16.97 V	22.2 V	11.0 V	N	0.440 V
8/20/1985	2.50 V	6.21 V	110.0 V	1.35 V	5.90 V	2.100 V	10.500 V	0.840 V	16.25 V	17.7 V	13.5 V	N	0.630 V
7/21/1986	2.50 V	6.34 V	112.0 V	1.63 V	5.55 V	1.960 V	9.860 V	0.880 V	17.80 V	18.5 V	9.0 V	N	0.700 V
7/13/1987	3.10 V	6.42 V	122.0 V	2.10 V	5.80 V	1.980 V	11.200 V	0.940 V	20.00 V	19.5 V	6.5 V	N	0.440 V
7/07/1988	4.80 V	5.93 V	147.0 V	2.07 V	7.00 V	2.620 V	14.300 V	1.010 V	24.70 V	18.8 V	10.5 V	N	0.860 V
6/27/1989	2.80 V	6.30 V	130.6 V	1.47 V	6.40 V	2.280 V	11.900 V	1.040 V	20.80 V	18.3 V	13.5 V	N	1.220 V
7/24/1990	4.80 V	5.97 V	135.9 V	2.05 V	6.60 V	2.260 V	13.200 V	1.120 V	24.50 V	20.1 V	11.5 V	N	1.120 V
7/15/1991	4.40 V	6.14 V	134.5 V	3.06 C	7.10 V	2.320 V	12.800 V	1.140 V	22.60 V	21.1 V	9.0 V	N	0.900 V
7/01/1992	3.25 V	6.27 V	156.0 V	3.19 C	8.80 V	2.280 V	14.000 V	1.080 V	27.50 V	21.3 V	9.0 V	N	1.120 V
6/29/1993	2.80 V	6.38 V	155.0 V	2.92 V	8.10 V	2.130 V	14.740 V	1.003 V	29.10 V	17.5 V	13.6 V	N	0.480 V
6/29/1994	3.60 V	6.40 V	166.0 V	3.08 V	9.05 V	2.270 V	16.390 V	1.108 V	32.20 V	18.3 V	10.2 V	N	0.660 V
6/26/1995	N	6.68 V	150.0 V	4.33 C	7.57 V	2.000 V	15.100 V	1.010 V	28.30 V	16.0 V	13.0 V	N	0.440 V
7/02/1996	N	6.71 V	146.0 V	3.98 C	7.10 V	2.020 V	15.300 V	1.000 V	26.60 V	18.0 V	11.6 V	N	0.900 V
7/14/1997	N	6.99 V	143.3 V	4.27 V	6.76 V	1.940 V	15.400 V	0.910 V	27.00 V	16.5 V	16.0 V	N	0.840 V
7/07/1998	N	7.05 V	144.4 V	5.63 V	6.65 V	1.960 V	16.200 V	0.930 V	27.80 V	13.5 V	N	N	0.900 V
7/12/1999	N	6.98 V	157.3 V	5.49 V	6.70 V	2.060 V	18.000 V	0.950 V	29.80 V	14.0 V	N	N	O
7/05/2000	N	7.00 V	158.3 V	5.60 V	6.75 V	2.120 V	18.000 V	0.940 V	31.40 V	15.0 V	N	N	0.420 V
7/23/2001	N	7.05 V	172.0 V	4.10 V	6.60 V	2.160 V	19.900 V	1.000 V	33.00 V	17.5 V	N	N	0.840 V
7/10/2002	N	6.77 V	141.4 V	4.06 V	5.72 V	1.880 V	16.200 V	0.835 V	27.70 V	16.0 V	N	N	1.000 V
7/15/2003	2.60 V	6.86 V	142.0 V	4.88 V	6.22 V	1.920 V	17.200 V	1.030 V	27.30 V	14.3 V	N	N	0.620 V
7/27/2004	3.85 V	6.92 V	163.0 V	6.01 V	8.38 V	2.880 V	20.000 V	0.850 V	O	O	N	N	0.380 V
7/26/2005	3.00 V	7.01 V	132.0 V	N	5.00 V	1.680 V	12.100 V	0.820 V	O	11.5 V	N	N	0.820 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
7/29/1981	0.0300 V	0.1260 V	0.1100 V	0.0300 V	0.2900 V	0.0280 V	0.0060 V	0.17 V	0.008 V	0.006 C	1.4 V	0.20 T
7/21/1982	0.0500 V	0.0730 V	0.0360 V	0.0190 V	0.2000 V	0.0210 V	N	N	N	N	N	N
7/13/1983	0.0300 V	0.0850 V	0.0770 V	0.0250 V	0.2900 V	0.0290 V	N	N	N	N	N	N
8/02/1984	0.3400 V	0.0850 V	0.0390 V	0.0170 V	0.1900 V	0.0180 V	N	N	N	N	N	N
8/20/1985	0.2000 V	0.1000 V	0.0150 V	0.0140 V	0.2400 V	0.0190 V	N	N	N	N	N	N
7/21/1986	0.1200 V	0.0900 V	0.0280 V	0.0180 V	0.1800 V	0.0140 V	N	N	N	N	N	N
7/13/1987	0.1200 V	0.0380 V	0.0370 V	0.0040 V	O	0.0090 V	N	N	N	N	N	N
7/07/1988	0.2800 V	0.1000 V	0.0480 T	0.0210 V	0.2000 V	0.0190 V	N	N	N	N	2.8 V	N
6/27/1989	0.1500 V	0.0960 V	0.0790 T	0.0300 V	0.2500 V	0.0240 V	N	N	N	N	3.4 V	N
7/24/1990	0.1500 V	0.0830 V	0.0500 T	0.0220 V	0.1900 V	0.0290 V	N	N	N	N	3.2 V	0.80 T
7/15/1991	0.0800 T	0.0910 V	0.0300 T	0.0200 V	0.1900 V	0.0200 V	0.0070 T	0.34 V	0.040 V	0.015 T	3.4 V	1.00 V
7/01/1992	0.0650 T	0.0790 V	0.0380 T	0.0210 V	0.1900 V	0.0160 V	0.0050 T	0.32 V	0.018 V	0.005 W	3.3 V	0.60 T
6/29/1993	0.0200 W	O	0.0130 T	0.0160 V	0.1300 V	0.0120 V	0.0080 T	0.32 V	0.030 V	0.015 T	3.5 V	1.00 V
6/29/1994	0.1500 V	0.0890 V	0.0350 T	0.0190 V	0.1600 V	0.0140 V	0.0080 T	0.30 V	0.052 V	0.005 W	3.5 V	0.80 T
6/26/1995	0.0400 T	0.0520 V	0.0200 T	0.0150 V	0.1300 V	0.0095 V	0.0040 T	0.32 V	0.002 W	0.010 T	4.1 V	1.00 T
7/02/1996	0.0800 T	0.0430 V	0.0400 T	0.0170 V	0.1400 V	0.0110 V	0.0060 T	0.28 V	0.018 V	0.005 W	3.4 V	0.20 W
7/14/1997	0.1100 V	0.0177 V	0.0252 V	0.0151 V	0.1320 V	0.0083 V	0.0080 V*	0.30 V	0.039 V	0.008 T	3.6 V	1.04 V
7/07/1998	0.0984 V	0.0212 V	0.0183 V	0.0143 V	0.1010 V	0.0066 V	0.0060 T	0.34 V	0.012 V	0.005 W	3.8 V	1.20 V
7/12/1999	0.0879 V	0.0321 V	0.0137 V	0.0161 V	0.0957 V	0.0054 V	0.0080 T	0.34 V	0.004 T	0.015 T	3.6 V	1.40 V
7/05/2000	0.0470 V	0.0149 V	0.0132 V	0.0131 V	0.1010 V	0.0064 V	0.0120 V	0.28 V	0.002 W	0.005 W	3.9 V	1.20 V
7/23/2001	0.0396 V	0.0144 V	0.0163 V	0.0160 V	0.1460 V	0.0106 V	0.0080 T	0.24 V	0.002 W	0.005 W	3.0 V	0.40 T
7/10/2002	0.0948 V	0.0285 V	0.0288 V	0.0212 V	0.1470 V	0.0112 V	0.0070 V*	0.29 V	0.048 V	0.004 T	4.4 V	1.08 V
7/15/2003	0.0785 V	0.0327 V	0.0278 V	0.0211 V	0.1100 V	0.0086 V	0.0065 V*	0.30 V	0.048 V	0.010 V	4.8 V	1.22 V
7/27/2004	0.0979 V	0.0156 V	0.0170 V	0.0197 V	0.0922 V	0.0056 V	0.0140 V*	0.21 V	0.016 V	0.004 T	2.8 V	O
7/26/2005	0.0780 V	0.0135 V	0.0120 V	0.0144 V	0.0739 V	0.0036 V	0.0056 V*	0.31 V	0.010 V	0.002 W	4.1 V	1.48 V

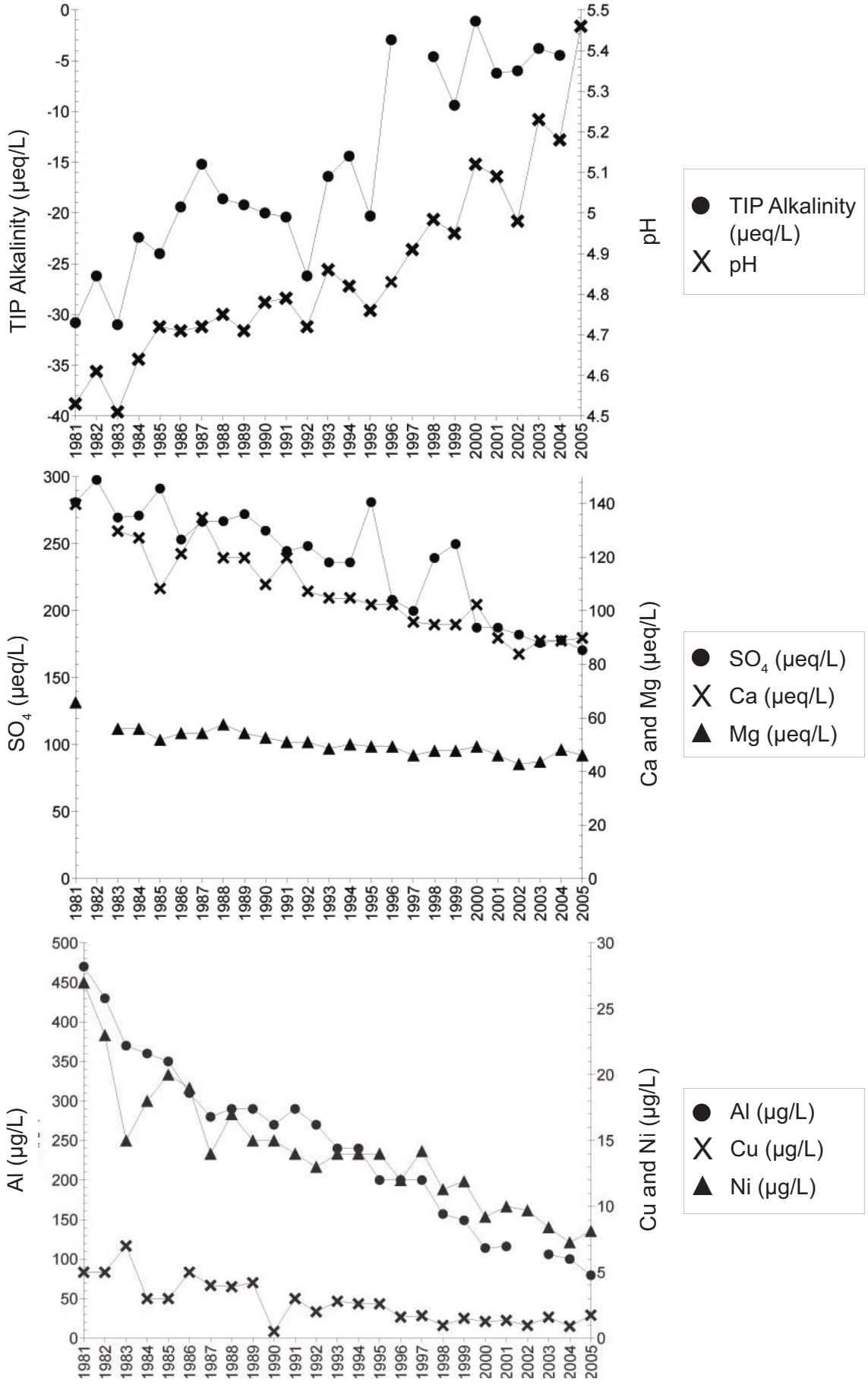
C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Wolf Lake



SES ID #	142	**Shoreline length (km)**	7.38
Township	MacKelcan	**Maximum depth (m)**	not available
Latitude	46°51’	**Mean depth (m)**	not available
Longitude	80°37’	**Volume (x 10^4 m^3)**	not available
Distance from Sudbury (km)	51	**Area (ha)**	87.36
Elevation (m)	295	**Road access**	No
Watershed code	2DC02		

Wolf Lake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pH
TIP Alkalinity (µeq/L)
pH
SO4 (µeq/L)
Ca and Mg (µeq/L)
SO4 (µeq/L)
Ca (µeq/L)
Mg (µeq/L)
Al (µg/L)
Cu and Ni (µg/L)
Al (µg/L)
Cu (µg/L)
Ni (µg/L)

WOLF SES # 142

DATE	Secchi (m)	pH	Cond (µs/cm)	Alk (TIP) (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Cl (mg/L)	SO_4 (mg/L)	Colour TCU	AColour HZU	SiO_3 (mg/L)
8/11/1981	13.20 V	4.53 V	45.0 V	-1.54 V	2.80 V	0.800 V	0.500 V	0.350 V	0.30 V	13.5 V	N	O	0.650 V
7/24/1982	9.00 V	4.61 V	44.0 V	-1.31 V	N	N	N	N	N	14.3 V	N	1.8 V	N
7/25/1983	12.00 V	4.51 V	46.7 V	-1.55 V	2.60 V	0.680 V	1.000 V	O	1.08 V	13.0 V	N	2.4 V	0.750 V
7/24/1984	10.00 V	4.64 V	42.5 V	-1.12 V	2.55 V	0.680 V	0.620 V	0.370 V	0.19 V	13.0 V	1.5 V	N	0.760 V
7/23/1985	12.00 V	4.72 V	42.0 V	-1.20 V	2.17 V	0.630 V	0.540 V	0.350 V	0.25 V	14.0 V	2.0 V	N	0.790 V
8/07/1986	14.00 V	4.71 V	38.5 V	-0.97 V	2.43 V	0.660 V	0.600 V	0.360 V	0.25 V	12.2 V	0.5 T	N	0.720 V
7/16/1987	16.50 V	4.72 V	40.0 V	-0.76 V	2.70 V	0.660 V	0.660 V	0.310 V	0.30 V	12.8 V	0.5 T	N	0.580 V
7/21/1988	12.50 V	4.75 V	40.0 V	-0.93 V	2.40 V	0.700 V	0.680 V	0.370 V	O	12.8 V	1.5 T	N	0.660 V
7/18/1989	17.00 V	4.71 V	38.8 V	-0.96 V	2.40 V	0.660 V	0.660 V	0.350 V	0.20 T	13.1 V	0.5 T	N	0.880 V
7/25/1990	16.30 V	4.78 V	37.9 V	-1.00 V	2.20 V	0.640 V	0.720 V	0.360 V	0.30 T	12.5 V	1.0 T	N	0.760 V
7/10/1991	N	4.79 V	37.1 V	-1.02 C	2.40 V	0.620 V	0.780 V	0.380 V	0.20 T	11.8 V	0.5 T	N	0.800 V
7/14/1992	17.00 V	4.72 V	36.5 V	-1.31 C	2.15 V	0.620 V	0.650 V	0.372 V	0.30 T	11.9 V	0.5 T	N	0.740 V
7/13/1993	15.50 V	4.86 V	35.5 V	-0.82 V	2.10 V	0.590 V	0.640 V	0.317 V	0.20 W	11.3 V	0.2 W	N	0.740 V
7/28/1994	15.50 V	4.82 V	34.5 V	-0.72 V	2.10 V	0.610 V	0.650 V	0.322 V	0.20 W	11.3 V	0.2 T	N	0.700 V
7/10/1995	N	4.76 V	33.0 V	-1.02 C	2.05 V	0.600 V	0.680 V	0.340 V	0.40 T	13.5 V	1.2 V	N	0.760 V
7/08/1996	N	4.83 V	31.0 V	-0.15 C	2.05 V	0.600 V	0.720 V	0.330 V	0.20 W	10.0 V	1.2 V	N	0.860 V
7/15/1997	N	4.91 V	31.4 V	O	1.92 V	0.560 V	0.630 V	0.260 V	0.22 V	9.6 V	1.6 V	N	0.920 V
7/12/1998	N	4.98 V	29.5 V	-0.23 V	1.90 V	0.580 V	0.760 V	0.300 V	0.20 W	11.5 V	N	N	0.820 V
7/14/1999	N	4.95 V	31.2 V	-0.47 V	1.90 V	0.580 V	0.700 V	0.310 V	0.20 W	12.0 V	N	N	O
7/17/2000	N	5.12 V	29.6 V	-0.06 V	2.05 V	0.600 V	0.700 V	0.320 V	0.20 W	9.0 V	N	N	0.720 V
7/02/2001	N	5.09 V	29.4 V	-0.31 V	1.80 V	0.560 V	0.680 V	0.330 V	0.20 W	9.0 V	N	N	0.680 V
7/09/2002	N	4.98 V	26.8 V	-0.30 V	1.68 V	0.520 V	0.660 V	0.285 V	0.26 V	8.8 V	N	N	0.840 V
7/17/2003	12.40 V	5.23 V	25.2 V	-0.19 V	1.78 V	0.530 V	0.655 V	0.300 V	0.25 V	8.5 V	N	N	0.800 V
7/12/2004	17.90 V	5.18 V	24.2 V	-0.22 V	1.78 V	0.585 V	0.675 V	0.280 V	0.27 V	8.6 V	N	N	0.940 V
7/05/2005	18.75 V	5.46 V	24.2 V	N	1.80 V	0.560 V	0.690 V	0.225 V	0.29 V	8.2 V	N	N	0.660 V

DATE	Fe (mg/L)	Mn (mg/L)	Al (mg/L)	Cu (mg/L)	Ni (mg/L)	Zn (mg/L)	TP (mg/L)	TKN (mg/L)	NH_3 + NH_4 (mg/L)	NO_2 + NO_3 (mg/L)	DOC (mg/L)	DIC (mg/L)
8/11/1981	0.0400 V	0.2340 V	0.4700 V	0.0050 V	0.0270 V	0.0160 V	0.0030 V	0.10 V	0.026 V	0.076 C	0.6 V	0.60 V
7/24/1982	0.0450 V	0.2430 V	0.4300 V	0.0050 V	0.0230 V	0.0130 V	N	N	N	N	N	N
7/25/1983	0.0350 V	0.1960 V	0.3700 V	0.0070 V	0.0150 V	O	N	N	N	N	N	N
7/24/1984	0.0550 V	0.1800 V	0.3600 V	0.0030 V	0.0180 V	0.0110 V	N	N	N	N	N	N
7/23/1985	0.0510 V	0.2200 V	0.3500 V	0.0030 V	0.0200 V	0.0160 V	N	N	N	N	N	N
8/07/1986	0.0320 V	0.1800 V	0.3100 V	0.0050 V	0.0190 V	0.0110 V	N	N	N	N	N	N
7/16/1987	0.0310 V	0.1700 V	0.2800 V	0.0040 V	0.0140 V	0.0100 V	N	N	N	N	N	N
7/21/1988	0.0320 T	0.1800 V	0.2900 V	0.0039 V	0.0170 V	0.0098 V	N	N	N	N	0.6 V	N
7/18/1989	0.0410 T	0.1600 V	0.2900 V	0.0042 V	0.0150 V	0.0099 V	N	N	N	N	0.7 V	N
7/25/1990	0.0400 T	0.1500 V	0.2700 V	0.0005 W	0.0150 V	0.0110 V	N	N	N	N	0.8 V	0.20 T
7/10/1991	0.0300 T	0.1500 V	0.2900 V	0.0030 V	0.0140 V	0.0090 V	0.0020 W	0.08 T	0.032 V	0.065 V	0.9 V	0.20 T
7/14/1992	0.0200 W	0.1300 V	0.2700 V	0.0020 T	0.0130 V	0.0080 V	0.0030 T	0.08 T	0.006 T	0.065 V	1.3 V	0.20 W
7/13/1993	0.0240 T	0.1200 V	0.2400 V	0.0028 V	0.0140 V	0.0068 V	0.0020 T	0.08 T	0.006 T	0.060 V	0.8 V	0.20 T
7/28/1994	0.0330 T	0.1300 V	0.2400 V	0.0026 V	0.0140 V	0.0082 V	0.0020 T	0.08 T	0.020 V	0.020 T	0.6 V	0.20 W
7/10/1995	0.0200 W	0.1100 V	0.2000 V	0.0026 V	0.0140 V	0.0075 V	0.0020 W	0.08 T	0.014 V	0.115 V	0.5 V	0.20 W
7/08/1996	0.0400 T	0.1000 V	0.2000 V	0.0016 V	0.0120 V	0.0065 V	0.0020 W	0.10 V	0.016 V	O	0.8 V	0.20 W
7/15/1997	0.0356 V	0.1060 V	0.2000 V	0.0017 V	0.0142 V	0.0070 V	0.0020 V*	0.10 V	0.022 V	0.084 V	0.7 V	0.26 V
7/12/1998	0.0227 V	0.0872 V	0.1570 V	0.0010 V	0.0113 V	0.0063 V	0.0020 W	0.12 V	0.010 V	0.065 V	0.6 V	0.20 W
7/14/1999	0.0201 V	0.0995 V	0.1490 V	0.0015 V	0.0119 V	0.0068 V	0.0020 W	0.08 T	0.014 V	0.080 V	0.7 V	0.20 W
7/17/2000	0.0144 V	0.0794 V	0.1140 V	0.0013 V	0.0092 V	0.0055 V	0.0040 T	0.08 T	0.018 V	0.067 V	0.7 V	O
7/02/2001	0.0321 V	0.0753 V	0.1160 V	0.0013 V	0.0100 V	0.0054 V	0.0040 T	0.10 V	0.020 V	0.059 V	1.2 V	0.80 T
7/09/2002	0.0085 V	0.0530 V	O	0.0010 V	0.0097 V	0.0040 V	0.0022 V*	0.16 V	0.026 V	0.052 V	0.8 V	0.12 V
7/17/2003	0.0299 V	0.0682 V	0.1060 V	0.0016 V	0.0084 V	0.0055 V	0.0023 V*	O	0.020 V	0.032 V	1.5 V	0.22 V
7/12/2004	0.0243 V	0.0556 V	0.1000 V	0.0009 V	0.0073 V	0.0050 V	0.0010 V*	0.10 V	0.020 V	0.042 V	1.0 V	0.24 V
7/05/2005	0.0250 V	0.0531 V	0.0796 V	0.0017 V	0.0081 V	0.0049 V	0.0018 V*	0.10 V	N	N	0.8 V	0.12 V

C - corrected or calculated value; **D** - for metal data >=1997, where measured value is below method detection limit, MDL has been reported; **L** - actual value is less than reported value; **N** - not measured; **O** - outlier removed; **T** - a measurable trace amount, interpret with caution; **V** - valid value; **W** - no measurable response (zero), < reported value; *TP duplicates averaged

Sunnywater Lake

Florence Lake