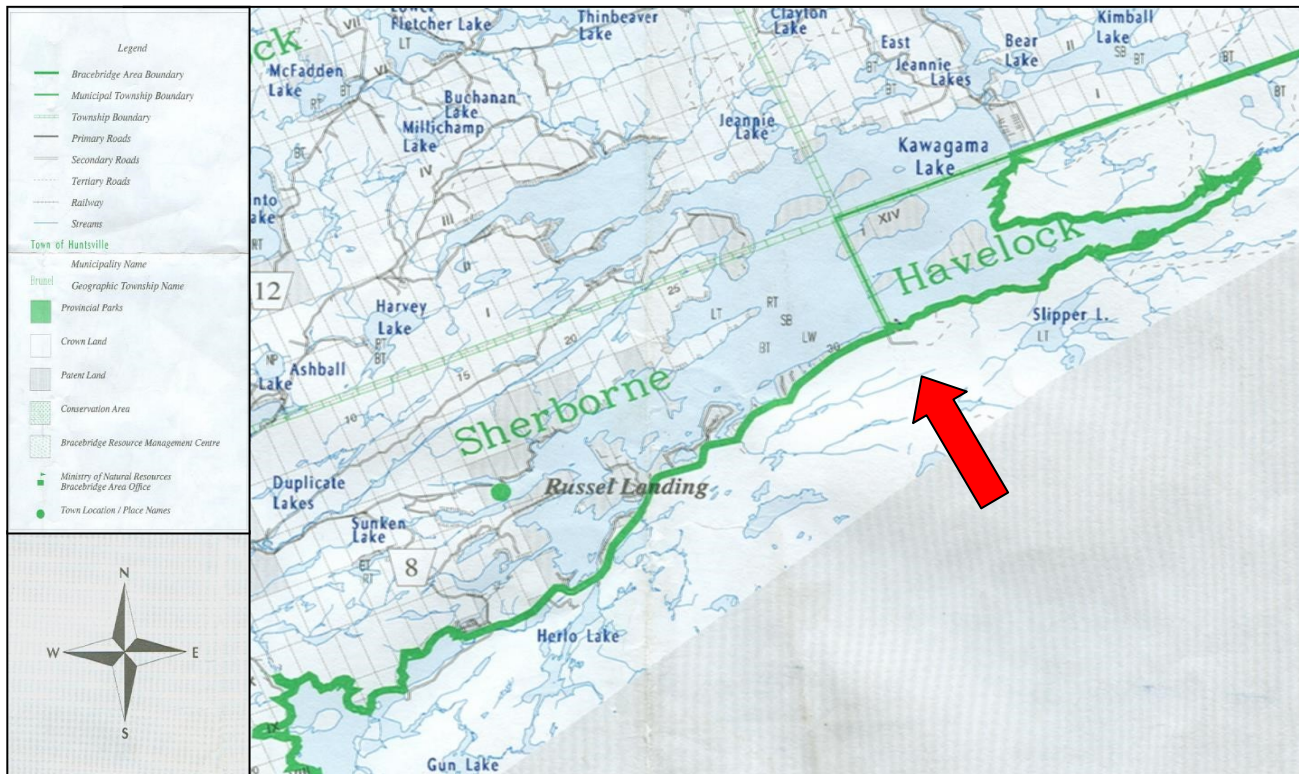


KAWAGAMA LAKE



LOCATION

County:..... Haliburton
Township:..... Algonquin Highlands & Dysart et al
Geographic Townships:..... McClintock, Livingstone, Havelock, & Sherborne
Watershed:..... Muskoka River
Zone:..... 17T
Easting:..... 675817
Northing:..... 5020169
Topographic Sheet:..... Haliburton 31 E/2

MORPHOMETRY (Main Basin)

Surface Area:..... 2530 ha
Watershed Area:..... 38 838 ha
Shoreline Length:..... N/A
Maximum Depth:..... 73.2 m
Mean Depth:..... 22.88 m
Total Volume:..... 578,960,000 m³

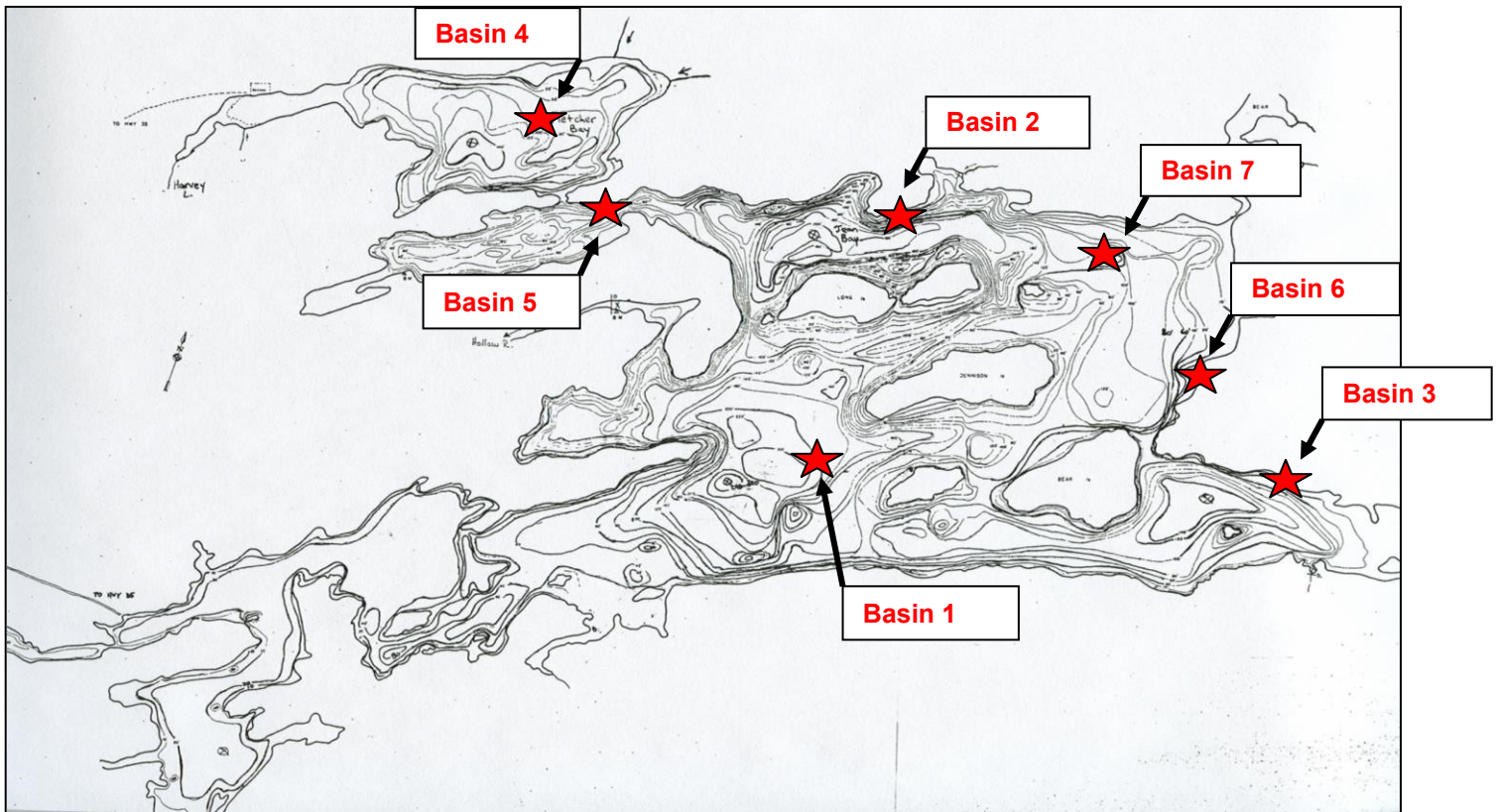
SHORELINE DEVELOPMENT (2002)

Residences:
 Permanent:..... 58
 Seasonal:..... 715
 Vacant Lots of Record:..... 195
Commercial Establishments:
 Total:..... 4
Other:
 Municipal Beach/Access Point:.. 1

MORPHOMETRY (Fletcher Bay)

Surface Area:..... 289 ha
Watershed Area:..... 6464.9 ha
Shoreline Length:.. N/A
Maximum Depth:..... 42.7 m
Mean Depth:..... 17.83 m
Total Volume:..... 51,490,000 m³

Figure 1. Kawagama Lake Bathymetry Map and Sampling Locations.



WATER CHEMISTRY

A summary of water quality data can be found in Tables 1 through 4.

Phosphorus and nitrogen concentrations in Kawagama Lake were low which would likely preclude the formation of nuisance algal populations.

The Secchi disk visibility ranged from 5 meters to 10.5 meters, indicating excellent water clarity.

The DOC concentration ranged from 2.9 mg/L to 3.7 mg/L. These are low values indicating little organic material input from the watershed.

Based on total alkalinity, Kawagama Lake is moderately sensitive to acidification.

Hardness values indicate that Kawagama Lake has soft water.

Table 1. Kawagama Lake Water Chemistry, 2002 (all values mg/L unless noted).

PARAMETER	29-May-02	09-Jul-02		29-Aug-02		29-Aug-02		29-Aug-02	
	EUP	EUP	MOB	EUP	MOB	EUP	MOB	EUP	MOB
Basin (none)	Basin 1	Basin 1		Basin 1		Basin 2 (Jean Bay)		Basin 3	
Secchi Disk (m)	7.0	6.25		8		10.5		8.8	
Total Phosphorus	0.004	0.006	0.004	0.008	0.003	0.004	0.004	0.004	0.005
Ammonia + Ammonium - Nitrogen	0.002	0.005	0.008	0.002	0.008	0.008	0.008	0.013	0.019
Nitrite-Nitrogen	0.001	0.004	0.001	0.002	0.003	0.005	0.005	0.002	0.006
Nitrate + Nitrite - Nitrogen	0.152	0.106	0.138	0.077	0.048	0.093	0.176	0.090	0.170
Total Kjeldahl Nitrogen	0.20	0.19	0.19	0.19	0.20	0.20	0.18	0.20	0.19
Dissolved Organic Carbon	3.0	3.0	3.1	3.1	3.1	3.1	2.8	3.0	2.8
Dissolved Inorganic Carbon	1.2	0.6	0.8	0.8	0.8	1.0	1.0	0.7	0.9
pH (no units)	6.66	6.80	6.68	6.92	6.93	6.79	6.69	6.85	6.74
Total Alkalinity	4.5	4.5	4.4	4.9	5.3	4.6	4.5	5.1	4.8
Conductivity (uS/cm)	24	22	23	26	25	26	26	25	26

EUP = Euphotic Zone = composite water sample from the surface to a depth equal 2X the Secchi depth.

MOB = Discrete water sample from one metre above the lake bottom at deepest point in the designated basin

N/A = not analyzed

Table 2. Kawagama Lake, Water Chemistry (continued) (all values mg/L unless noted).

PARAMETER	29-Aug-02		29-Aug-02		29-Aug-02		10-Sep-03	
	EUP	MOB	EUP	MOB	EUP	MOB	EUP	MOB
Basin (none)	Basin 4		Basin 5		Basin 6		Basin 1	
Secchi Disk (m)	7.25		8.50		8.0		8.5	
Total Phosphorus	0.008	0.008	0.005	0.006	0.007	0.005	0.003	0.003
Ammonia + Ammonium - Nitrogen	0.009	0.002	0.008	0.002	0.016	0.013	0.009	0.009
Nitrite-Nitrogen	0.006	0.004	0.006	0.004	0.006	0.005	0.001	0.001
Nitrate + Nitrite - Nitrogen	0.078	0.196	0.093	0.202	0.098	0.190	0.099	0.179
Total Kjeldahl Nitrogen	0.23	0.20	0.21	0.19	0.21	0.20	0.22	0.20
Dissolved Organic Carbon	3.5	3.5	3.1	2.9	2.9	2.9	3.1	2.6
Dissolved Inorganic Carbon	1.2	1.3	1.1	1.3	0.8	1.5	0.8	0.8
pH (no units)	6.85	6.75	6.83	6.59	6.84	6.74	6.77	6.44
Total Alkalinity	5.4	5.5	5.2	5.0	4.8	4.6	5.2	4.4
Conductivity (uS/cm)	27	28	26	26	26	26	27	25

EUP = Euphotic Zone = composite water sample from the surface to a depth equal 2X the Secchi depth.

MOB = Discrete water sample from one metre above the lake bottom at deepest point in the designated basin

N/A = not analyzed

Table 3. Kawagama Lake Water Chemistry (continued), 2009 (all values mg/L unless noted).

PARAMETER	20-May-09	20-May-09	20-May-09	20-May-09	20-May-09
	EUP	EUP	EUP	EUP	EUP
Basin (none)	Basin 2	Basin 3	Basin 4	Basin 5	Basin 7
Secchi Disk (m)	5.2	5.8	5	5	5.5
Total Phosphorus	0.003	0.003	0.003	0.003	0.003
Ammonia + Ammonium - Nitrogen	0.015	0.014	0.012	0.011	0.012
Nitrite-Nitrogen	0.001	0.001	0.001	0.001	0.001
Nitrate + Nitrite-Nitrogen	0.136	0.124	0.131	0.137	0.136
Total Kjeldahl Nitrogen	0.18	0.18	0.22	0.18	0.21
Dissolved Organic Carbon	3.3	3.2	3.7	3.3	3.2
Dissolved Inorganic Carbon	0.6	0.5	0.8	0.7	0.4
pH (no units)	6.64	6.70	6.73	6.67	6.67
Total Alkalinity	4.8	5	5.3	5	4.6
Conductivity (uS/cm)	23	23	25	24	23
Calcium	1.9	1.95	2	1.95	1.95
Magnesium	0.62	0.62	0.7	0.64	0.62
Hardness	7.4	7.4	8	7.6	7.4
Total Suspended Solids	0.5	0.5	0.5	0.5	0.7
Total Dissolved Solids	15	15	16	15	15

EUP = Euphotic Zone = composite water sample from the surface to a depth equal 2X the Secchi depth.
 MOB = Discrete water sample from one metre above the lake bottom at deepest point in the designated basin
 N/A = not analyzed

Table 4. Kawagama Lake Water Chemistry (continued), 2009 (all values mg/L unless noted).

PARAMETER	9-Sep-09		9-Sep-09		9-Sep-09		9-Sep-09		9-Sep-09	
	EUP	MOB	EUP	MOB	EUP	MOB	EUP	MOB	EUP	MOB
Basin (none)	Basin 1		Basin 2		Basin 4		Basin 5		Basin 7	
Secchi Disk (m)	5.75		6.25		5.5		5.75		6	
Total Phosphorus	0.004	0.004	0.003	0.004	0.004	0.006	0.003	0.007	0.003	0.005
Ammonia + Ammonium - Nitrogen	0.007	0.038	0.006	0.013	0.006	0.006	0.008	0.004	0.007	0.016
Nitrite-Nitrogen	0.001	0.002	0.001	0.002	0.001	0.001	0.002	0.001	0.001	0.001
Nitrate + Nitrite- Nitrogen	0.017	0.133	0.013	0.144	0.018	0.169	0.012	0.166	0.01	0.151
Total Kjeldahl Nitrogen	0.17	0.22	0.17	0.16	0.17	0.18	0.16	0.23	0.17	0.2
Dissolved Organic Carbon	3.1	2.8	3.2	2.9	3.6	3.4	3.4	3	3.1	2.8
Dissolved Inorganic Carbon	0.5	0.7	0.5	0.6	1	0.8	1	1.5	0.7	0.7
pH (no units)	6.82	6.65	6.81	6.59	6.80	6.44	6.77	6.41	6.80	6.56
Total Alkalinity	5.2	5.5	5.5	5.2	6.2	5.3	5.4	4.8	5.1	5.1
Conductivity (uS/cm)	22	24	22	23	24	25	22	24	22	23
Calcium	1.9	1.95	1.95	1.9	2.05	2	1.9	1.95	1.85	1.9
Magnesium	0.62	0.66	0.64	0.64	0.70	0.72	0.64	0.66	0.62	0.64
Total Suspended Solids	1.3	0.9	1.1	0.6	1	0.8	1.2	1.5	1	0.6
Total Dissolved Solids	15	15	14	15	16	17	15	15	14	15

EUP = Euphotic Zone = composite water sample from the surface to a depth equal 2X the Secchi depth.
 MOB = Discrete water sample from one metre above the lake bottom at deepest point in the designated basin
 N/A = not analyzed

The oxygen and temperature profiles are presented in Tables 6 through 8 as well as in Figures 2 through 15. The temperature profiles indicate that Kawagama Lake has well defined stratified temperature layers. The dissolved oxygen profiles generally show oxygen enrichment in the metalimnion. This is a common variation referred to as a positive heterograde and is likely due to thermally trapped algae photosynthesizing because of good water clarity. Dissolved oxygen profiles taken on September 9, 2009 for Basins 2, 3, 4 and 5 do not display the positive heterograde curve.

By the late summer/early fall critical period, the mean volume-weighted hypolimnetic dissolved oxygen (MVWHDO) concentrations in all basins were above the 7 mg/L criterion. Under these conditions the lake trout populations in this lake are not likely to be stressed. A summary of the MVWHDO concentrations can be found in Table 5 below. Historical MVWHDO concentrations have also been above the 7 mg/L criterion: in Basin 4 the MVWHDO concentration was 7.57 mg/L on September 2, 1986 while the MVWHDO concentration was 9.15 mg/L on September 2, 1986 in the southern portion of Kawagama Lake.

Table 5. MVWHDO Concentration Summary, Kawagama Lake (all values mg/L).

Date	Basin 1	Basin 2	Basin 3	Basin 4	Basin 5	Basin 6	Basin 7
29-Aug-02	10.21	10.45	9.80	8.31	9.08	9.78	N/A
10-Sep-03	9.06	N/A	N/A	N/A	N/A	N/A	N/A
09-Sep-09	10.43	10.18	9.47	8.16	8.86	N/A	9.81

Table 6. Kawagama Lake: Basin 1 Temperature (Temp) and Dissolved Oxygen Concentration (DO) Profiles, 2002 - 2009.

Depth (m)	09-Jul-02		29-Aug-02		10-Sep-03		09-Sep-09	
	Basin 1		Basin 1		Basin 1		Basin 1	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
0	23.1	8.2	20.9	7.8	20.1	7.8	20.43	9.45
1	23	8.4	20.9	7.7	19.6	7.74	20.5	9.4
2	23	8.4	20.9	7.7	19.5	7.66	20.5	9.4
3	22.9	8.5	21	7.7	19.5	7.65	20.54	9.39
4	22.7	8.5	21	7.8	19.4	7.51	20.55	9.38
5	22.6	8.5	21	7.4	19.4	7.43	20.55	9.38
6	22	8.9	21	7.5	19.3	7.48	20.54	9.42
7	18.6	10.5	21	7.7	19.3	7.43	20.32	9.44
8	14.4	11.6	21	7.5	19.2	7.49	19.39	9.49
9	12.4	12.2	15.8	10	19.1	7.47	17.01	9.72
10	9.4	12.4	11.2	11	13.8	9.71	14.53	10.11
11	9.1	12.3	9.6	10.6	10.4	9.88	10.92	10.49
12	8.8	12.4	8.9	10.6	8.7	9.56	9.84	10.56
13	8.1	12.3	8.2	10.5	7.7	9.2	8.82	10.57
14	7.8	12.2	7.9	10.4	7.2	8.79	8.29	10.58
15	7.5	12.2	7.7	9.8	6.9	9.01	7.93	10.48
16	7.3	12.2	7.6	9.6	6.6	8.93	7.76	10.4
17	7.2	12.2	7.5	9.8	6.5	8.89	7.62	10.3
18	7.2	12.3	7.3	10	6.3	8.84	7.53	10.23
19	7.1	12.4	7.2	10.1	6.2	8.84	7.47	10.19
20	7	12.3	7.2	10.3	6	8.66	7.42	10.15
21	6.9	12.3	7.1	9.9	6	8.86	7.39	10.15
22	6.9	12.4	6.9	10.1	5.8	8.9	7.31	10.18
23	6.8	12.4	6.8	10.2	5.7	8.89	7.22	10.2
24	6.7	12.4	6.6	10.1	5.6	8.91	7.01	10.26
25	6.6	12.4	6.5	10.2	5.4	8.91	6.72	10.27
26	6.4	12.5	6.4	10.1	5.3	9.04	6.51	10.33
27	6.3	12.5	6.3	10.1	5.3	9.07	6.35	10.39
28	6.2	12.5	6.2	10.1	5.2	9.09	6.17	10.42
29	6.1	12.5	6.1	10	5.2	9.12	6.05	10.52
30	6	12.5	6	10.2	5.1	9.14	5.98	10.56
31	5.9	12.5	5.9	10.2	5	9.15	5.92	10.56
32	5.9	12.6	5.8	10.2	5	9.2	5.86	10.61
33	5.8	12.6	5.8	10.3	4.9	9.22	5.79	10.6
34	5.8	12.6	5.8	10.3	4.9	9.22	5.74	10.59
35	5.7	12.7	5.7	10.4	4.8	9.3	5.67	10.64
36	5.7	12.7	5.7	10.2	4.7	9.36	5.63	10.64
37	5.7	12.6	5.7	10.2	4.6	9.37	5.57	10.65
38	5.6	12.7	5.6	10.2	4.6	9.4	5.54	10.64
39	5.6	12.7	5.6	10.3	4.6	9.38	5.5	10.65
40	5.5	12.6	5.5	10.4	4.6	9.34	5.44	10.67
41	5.5	12.6	5.5	10.4	4.5	9.35	5.41	10.63
42	5.5	12.6	5.5	10.5	4.5	9.35	5.4	10.65
43	5.4	12.6	5.5	10.5	4.5	9.33	5.37	10.63
44	5.4	12.7	5.4	10.5	4.5	9.31	5.34	10.61
45	5.4	12.7	5.4	10.5	4.4	9.36	5.31	10.62
46	5.4	12.7	5.4	10.3	4.4	9.35	5.3	10.63
47	5.4	12.7	5.4	10.5	4.4	9.38	5.28	10.64

Depth (m)	09-Jul-02		29-Aug-02		10-Sep-03		09-Sep-09	
	Basin 1		Basin 1		Basin 1		Basin 1	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
48	5.3	12.7	5.4	10.6	4.4	9.41	5.26	10.64
49	5.3	12.6	5.3	10.5	4.3	9.37	5.25	10.63
50	5.3	12.8	5.3	10.4	4.3	9.39	5.22	10.62
51	N/A	N/A	5.3	10.4	4.3	9.42	5.2	10.58
52	N/A	N/A	5.3	10.4	4.3	9.4	5.18	10.55
53	N/A	N/A	5.3	10.4	4.3	9.35	5.17	10.49
54	N/A	N/A	5.2	10.4	4.2	9.3	5.16	10.49
55	N/A	N/A	5.2	10.4	4.2	9.29	5.11	10.48
56	N/A	N/A	5.2	10.4	4.2	9.25	5.08	10.44
57	N/A	N/A	5.2	10.2	4.2	9.29	5.07	10.43
58	N/A	N/A	5.2	10.1	4.2	9.28	5.06	10.39
59	N/A	N/A	N/A	N/A	4.2	9.27	5.05	10.34
60	N/A	N/A	N/A	N/A	4.2	9.26	5.02	10.32
61	N/A	N/A	N/A	N/A	4.1	9.21	5	10.3
62	N/A	N/A	N/A	N/A	4.1	9.16	4.99	10.27
63	N/A	N/A	N/A	N/A	4.1	9.13	4.99	10.28
64	N/A	N/A	N/A	N/A	4.1	8.85	4.97	10.21
65	N/A	N/A	N/A	N/A	4.1	8.74	4.95	10.16
66	N/A	N/A	N/A	N/A	4.1	0.3	4.94	10.09
67	N/A	N/A	N/A	N/A	4.1	0.23	4.92	9.99
68	N/A	N/A	N/A	N/A	4.2	0.2	4.92	9.82
69	N/A	N/A	N/A	N/A	4.1	0.18	4.9	9.77
70	N/A	N/A	N/A	N/A	4.1	0.15	4.88	9.67
71	N/A	N/A	N/A	N/A	4.1	0.14	4.85	9.12
72	N/A	N/A	N/A	N/A	4.1	0.15	4.85	8.96

Table 7. Kawagama Lake: Basins 2, 3, and 4 Temperature (Temp) and Dissolved Oxygen Concentration (DO) Profiles, 2002 – 2009.

Depth (m)	29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09	
	Basin 2		Basin 2		Basin 3		Basin 3		Basin 4		Basin 4	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
0	21.8	7.8	21.06	9.41	22.2	7.9	21.07	9.11	21.8	7.8	20.95	9.2
1	21.7	8	21.15	9.34	21.6	7.9	21.1	9.08	21.6	7.8	20.97	9.21
2	21.6	8	21.06	9.3	21.2	8.2	20.59	9.13	21.4	7.8	20.82	9.18
3	21.5	7.8	20.99	9.29	21.1	8	20.32	9.16	21.3	7.9	20.73	9.19
4	21.4	7.9	20.93	9.28	21	7.8	20.19	9.16	21.2	7.8	20.49	9.22
5	21.3	8.1	20.83	9.28	20.9	7.9	20.1	9.14	21.2	7.8	19.9	9.29
6	21.3	7.9	20.3	9.33	20.9	7.9	19.84	9.16	21.1	7.9	19.29	9.26
7	21.2	8	19.53	9.4	20.7	7.7	19.47	9.14	18.8	8.9	18.12	9.05
8	21.9	8	19.16	9.37	20	8.1	18.93	9.14	14.3	10	15.44	9.17
9	14.5	10.6	17.43	9.5	17.8	9.3	17.24	9.19	11.2	8.6	12.19	9.04
10	11.7	11.4	14.07	9.82	12.3	11.1	13.56	9.59	9.5	8.2	10.7	9.02
11	10	11.2	10.28	10.07	9.9	11.1	11.51	9.8	9	8.3	9.44	8.72
12	9	10.9	9.35	10.17	9	10.3	10.1	9.85	8.6	8.1	8.36	8.46
13	8.5	10.5	8.77	10.22	8.2	10.2	9.13	9.84	8.1	8.3	7.93	8.35
14	8.2	10.5	8.33	10.25	7.9	10	8.52	9.85	7.5	8.4	7.62	8.35
15	8	10.5	7.92	10.23	7.8	10	8.16	9.75	7.3	8.4	7.33	8.29

Depth (m)	29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09	
	Basin 2		Basin 2		Basin 3		Basin 3		Basin 4		Basin 4	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
16	7.7	10.3	7.74	10.18	7.5	10	7.97	9.73	7.1	8.5	7.13	8.27
17	7.5	10.2	7.63	10.16	7.5	9.8	7.8	9.68	6.8	8.7	6.97	8.3
18	7.4	10.2	7.49	10.15	7.4	9.7	7.71	9.64	6.7	8.6	6.79	8.33
19	7.3	10.3	7.39	10.17	7.3	9.7	7.64	9.62	6.6	8.4	6.69	8.27
20	7.2	10.3	7.25	10.19	7.3	9.8	7.58	9.57	6.5	8.3	6.6	8.24
21	7.1	10.2	7.15	10.21	7.2	9.8	7.52	9.56	6.5	8.4	6.53	8.23
22	7	10.4	7.01	10.25	7.2	9.8	7.48	9.53	6.5	8.5	6.47	8.22
23	6.9	10.4	6.91	10.26	7.2	9.6	7.44	9.46	6.5	8.5	6.42	8.16
24	6.8	10.4	6.85	10.22	7.2	9.6	7.42	9.43	6.4	8.4	6.4	8.19
25	6.7	10.5	6.73	10.28	7.1	9.6	7.39	9.41	6.4	8.3	6.37	8.13
26	6.5	10.3	6.62	10.27	7.1	9.7	7.36	9.4	6.4	8.3	6.35	8.1
27	6.4	10.4	6.57	10.26	7.1	9.6	7.33	9.42	6.4	8.3	6.34	8.07
28	6.3	10.5	6.53	10.24	7.1	9.6	7.31	9.42	6.4	8.2	6.32	8.01
29	6.3	10.5	6.4	10.22	7	9.6	7.28	9.34	6.3	7.9	6.3	7.97
30	6.3	10.1	6.27	10.2	7	9.4	7.25	9.31	6.3	8	6.28	7.92
31	6.2	10.3	6.2	10.2	7	9.6	7.23	9.24	6.3	8.2	6.28	7.9
32	6.1	10.4	6.13	10.19	7	9.5	7.21	9.22	6.3	8.3	6.27	7.85
33	6.1	10.3	6.06	10.19	7	9.4	7.19	9.17	6.3	8.3	6.25	7.81
34	6.1	10.5	6.02	10.21	6.9	9.4	7.15	9.11	6.3	8.2	6.23	7.71
35	6	10.6	5.98	10.21	6.9	9.4	7.12	9.05	6.3	8	6.22	7.61
36	6	10.6	5.95	10.22	6.9	9.4	7.09	8.97	6.3	7.9	6.19	7.49
37	6	10.7	5.93	10.22	6.9	9.3	7.07	8.94	6.3	7.8	6.17	7.33
38	5.9	10.6	5.87	10.22	6.9	9.3	7.04	8.87	6.2	7.8	6.15	7.21
39	5.9	10.5	5.85	10.22	6.8	9.1	7.03	8.83	6.2	7.5	6.08	7.07
40	5.9	10.4	5.83	10.21	6.8	9	7	8.78	6.2	7.1	N/A	N/A
41	5.8	10.5	5.8	10.18	6.7	8.7	6.98	8.71	N/A	N/A	N/A	N/A
42	5.8	10.4	5.8	10.2	N/A	N/A	6.91	8.15	N/A	N/A	N/A	N/A
43	5.8	10.5	5.78	10.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
44	5.8	10.5	5.76	10.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45	5.8	10.6	5.75	10.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
46	5.8	10.5	5.74	10.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47	5.7	10.4	5.73	10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48	5.7	10.4	5.72	10.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49	5.7	10.4	5.71	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	5.7	10.4	5.69	9.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51	5.7	10.4	5.68	9.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
52	5.7	10.4	5.67	9.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53	5.6	10.4	5.66	9.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
54	5.6	10.2	5.66	9.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	5.6	10	5.65	9.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	5.6	9.9	5.64	9.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	5.6	9.8	5.62	9.71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
58	5.6	9.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 8. Kawagama Lake: Basins 5, 6, and 7 Temperature (Temp) and Dissolved Oxygen Concentration (DO) Profiles, 2002 – 2009.

Depth (m)	29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09	
	Basin 5		Basin 5		Basin 6		Basin 7	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
0	21.5	8	20.67	9.27	21.8	7.8	21.46	9.12
1	21.4	8	20.83	9.19	21.4	8	21.05	9.21
2	21.3	7.9	20.81	9.18	21.3	8	20.9	9.25
3	21.3	7.9	20.8	9.18	21.3	8	20.73	9.28
4	21.3	7.9	20.78	9.18	21.2	8	20.65	9.28
5	21.2	8	20.63	9.22	21.2	8.1	20.46	9.31
6	21.2	7.9	20.07	9.28	21.1	8.1	20.08	9.36
7	21.2	8	19.61	9.31	21	7.9	19.69	9.37
8	20.6	8	19.32	9.24	20.2	8	19.27	9.33
9	15.3	10.2	17.91	9.29	16.3	9.9	17.6	9.44
10	11.1	10.6	13.9	9.69	12.1	11	13.37	9.86
11	9.9	9.8	11.19	9.97	10.1	11.3	10.77	10.06
12	9.2	9.7	10.11	9.8	9.4	10.7	9.56	10.08
13	8.8	10	9.43	9.79	8.6	10.5	8.89	10.1
14	8.5	9.9	8.93	9.65	8.1	10.3	8.43	10.05
15	8.2	9.7	8.6	9.56	7.9	9.8	8.11	9.98
16	8.2	9.8	8.37	9.45	7.7	9.7	7.88	9.86
17	7.9	9.8	8.15	9.44	7.5	9.9	7.72	9.82
18	7.4	9.3	7.76	9.39	7.4	9.9	7.65	9.83
19	7.3	9.4	7.42	9.29	7.3	10	7.38	9.81
20	7.1	9.4	7.24	9.06	7.2	10	7.29	9.82
21	6.9	9.2	7.13	8.94	7.1	9.9	7.16	9.85
22	6.7	9.2	7.03	8.89	7	10	7.04	9.81
23	6.6	9.1	6.93	8.81	6.9	10	6.92	9.77
24	6.6	8.9	6.81	8.75	6.5	9.8	6.8	9.78
25	6.5	8.6	6.73	8.72	6.5	9.5	6.71	9.79
26	6.5	8.6	6.65	8.55	6.4	9.8	6.64	9.79
27	6.4	8.5	6.58	8.43	6.4	9.5	6.53	9.75
28	6.3	8.6	6.5	8.34	6.3	9.3	6.45	9.72
29	6.3	8.6	6.44	8.24	6.3	1.6	6.34	9.7
30	6.3	8.5	6.39	8.15	N/A	N/A	6.28	9.73
31	6.2	8.5	6.33	8.05	N/A	N/A	6.18	9.71
32	6.2	8.5	6.29	7.92	N/A	N/A	6.13	9.72
33	6.1	8.4	6.29	7.7	N/A	N/A	6.06	9.79
34	6.1	8.2	6.24	7.57	N/A	N/A	6.04	9.81
35	6	7.9	6.21	7.44	N/A	N/A	5.97	9.82
36	6	7.9	6.2	7.25	N/A	N/A	5.94	9.78
37	6	7.9	6.18	7.11	N/A	N/A	5.91	9.79
38	6	7.8	6.17	7	N/A	N/A	5.87	9.77
39	6	7.8	N/A	N/A	N/A	N/A	5.83	9.77
40	6	7.7	N/A	N/A	N/A	N/A	5.81	9.75
41	6	6.3	N/A	N/A	N/A	N/A	5.79	9.74
42	N/A	N/A	N/A	N/A	N/A	N/A	5.79	9.72
43	N/A	N/A	N/A	N/A	N/A	N/A	5.79	9.7
44	N/A	N/A	N/A	N/A	N/A	N/A	5.78	9.69
45	N/A	N/A	N/A	N/A	N/A	N/A	5.78	9.67

Depth (m)	29-Aug-02		09-Sep-09		29-Aug-02		09-Sep-09	
	Basin 5		Basin 5		Basin 6		Basin 7	
	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)	Temp (°C)	DO (mg/L)
46	N/A	N/A	N/A	N/A	N/A	N/A	5.77	9.65
47	N/A	N/A	N/A	N/A	N/A	N/A	5.76	9.61
48	N/A	N/A	N/A	N/A	N/A	N/A	5.76	9.58
49	N/A	N/A	N/A	N/A	N/A	N/A	5.76	9.54
50	N/A	N/A	N/A	N/A	N/A	N/A	5.76	9.54
51	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.52
52	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.49
53	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.5
54	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.49
55	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.47
56	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.45
57	N/A	N/A	N/A	N/A	N/A	N/A	5.75	9.46
58	N/A	N/A	N/A	N/A	N/A	N/A	5.74	9.45

Figure 2. Temperature Profiles: Kawagama Lake Basin 1.

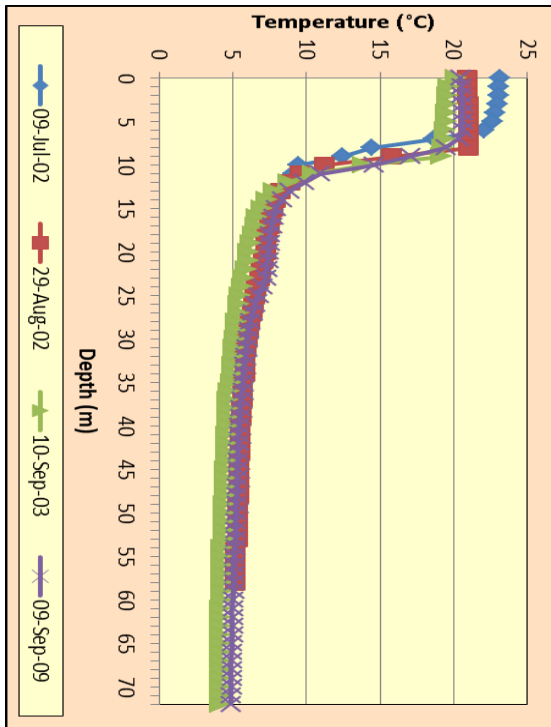
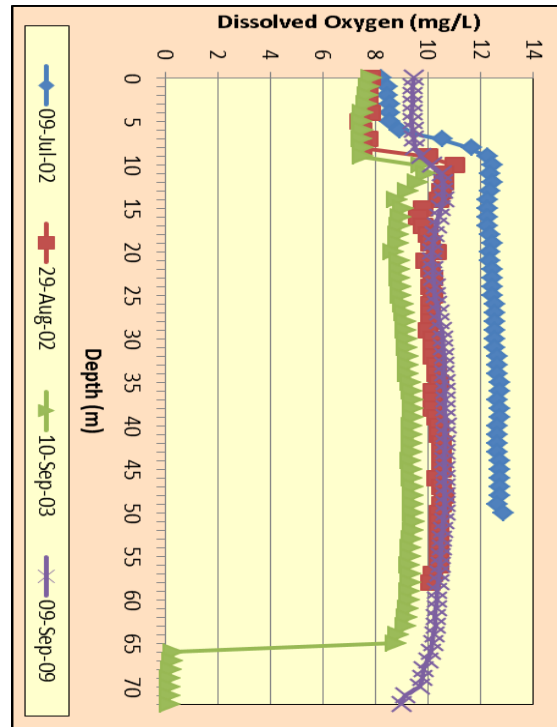
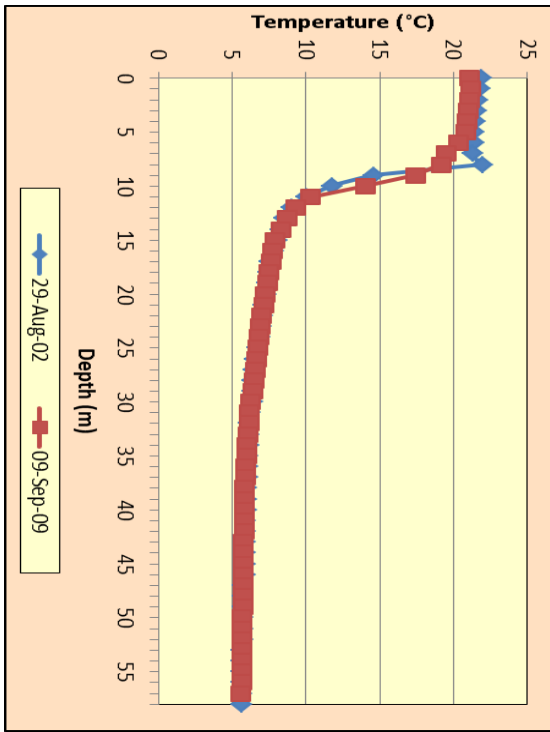


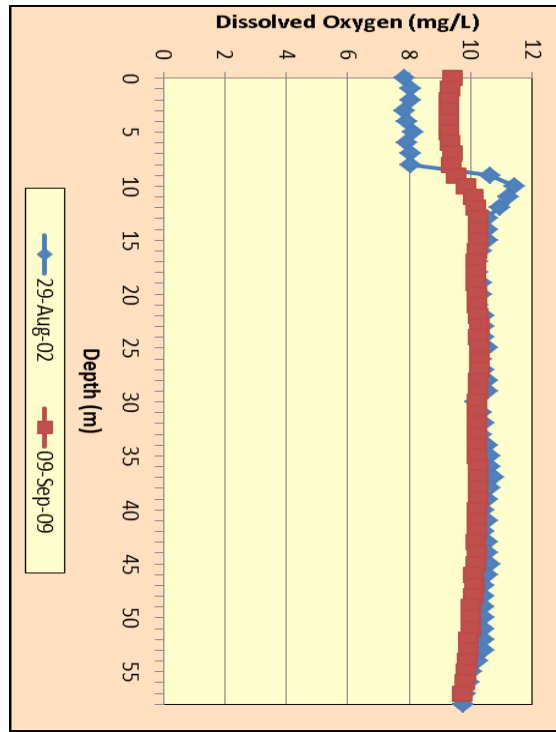
Figure 3. Dissolved Oxygen Profiles: Kawagama Lake Basin 1.



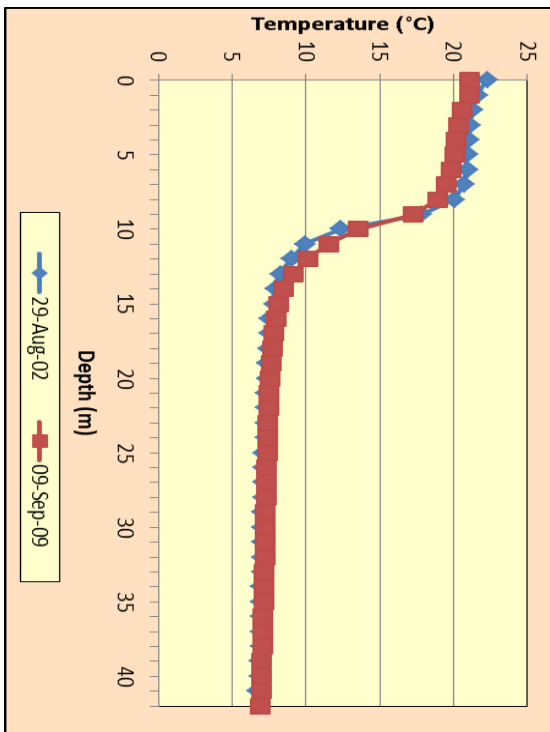
**Figure 4. Temperature Profiles:
Kawagama Lake Basin 2.**



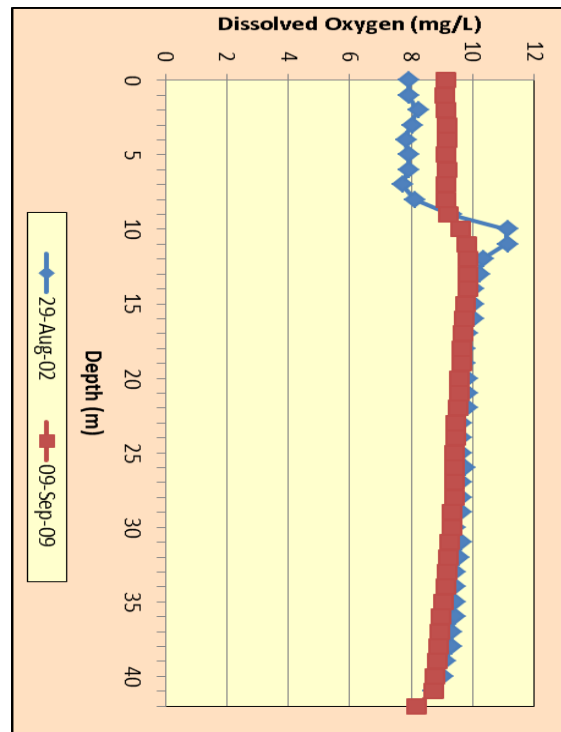
**Figure 5. Dissolved Oxygen Profiles:
Kawagama Lake Basin 2.**



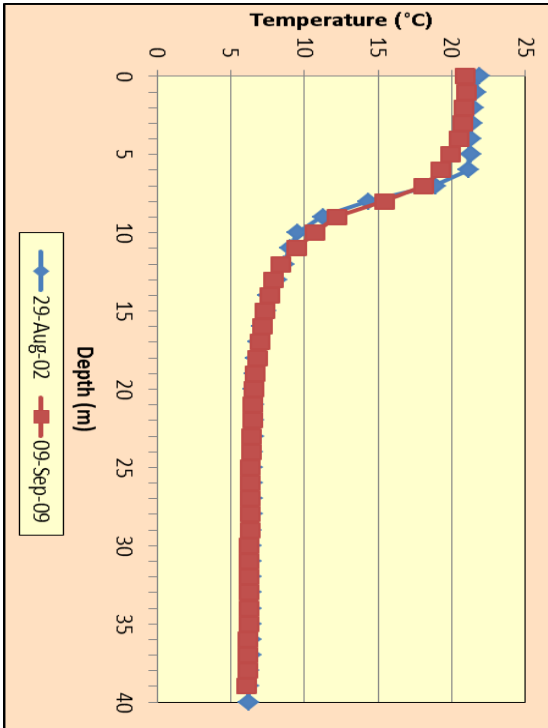
**Figure 6. Temperature Profiles:
Kawagama Lake Basin 3.**



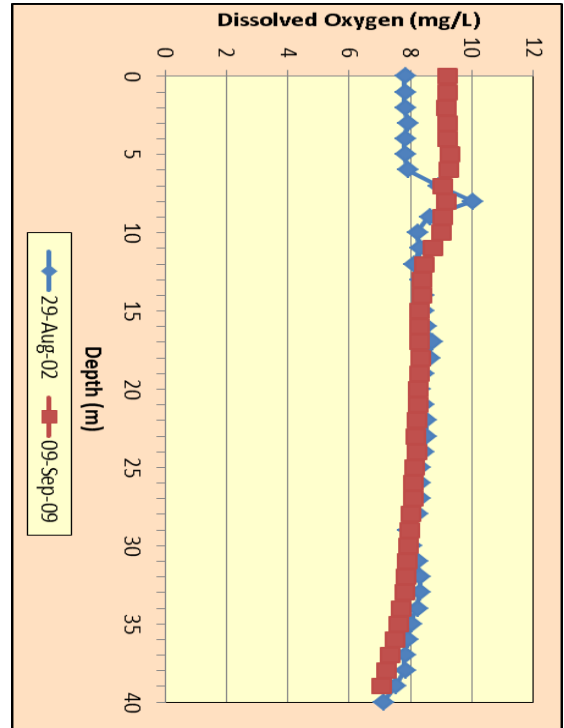
**Figure 7. Dissolved Oxygen Profiles:
Kawagama Lake Basin 3.**



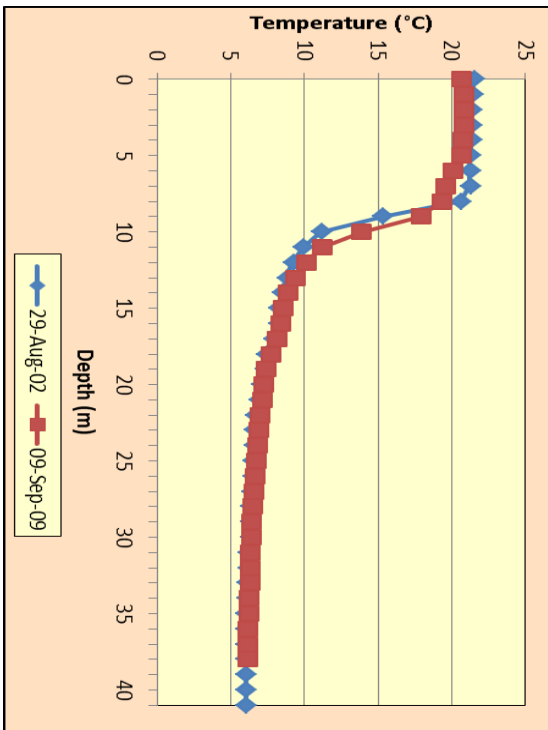
**Figure 8. Temperature Profiles
Kawagama Lake Basin 4.**



**Figure 9. Dissolved Oxygen Profiles:
Kawagama Lake Basin 4.**



**Figure 10. Temperature Profiles:
Kawagama Lake Basin 5.**



**Figure 11. Dissolved Oxygen Profiles:
Kawagama Lake Basin 5.**

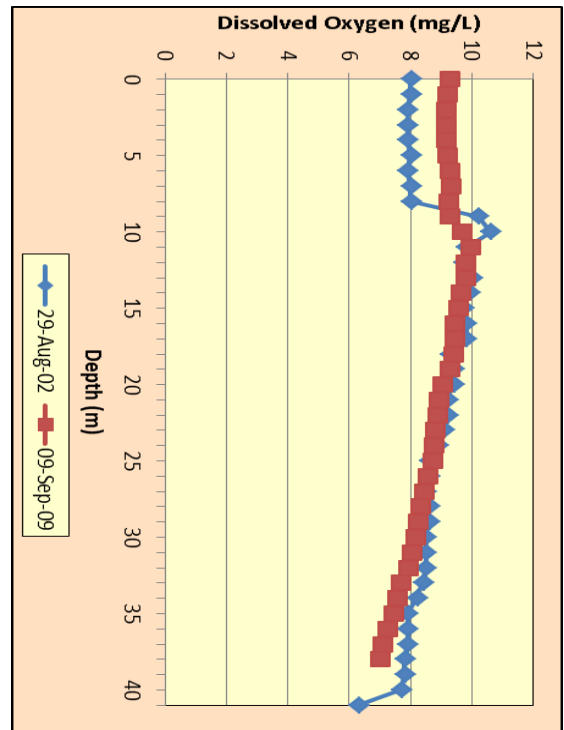


Figure 12. Temperature Profile: Kawagama Lake Basin 6.

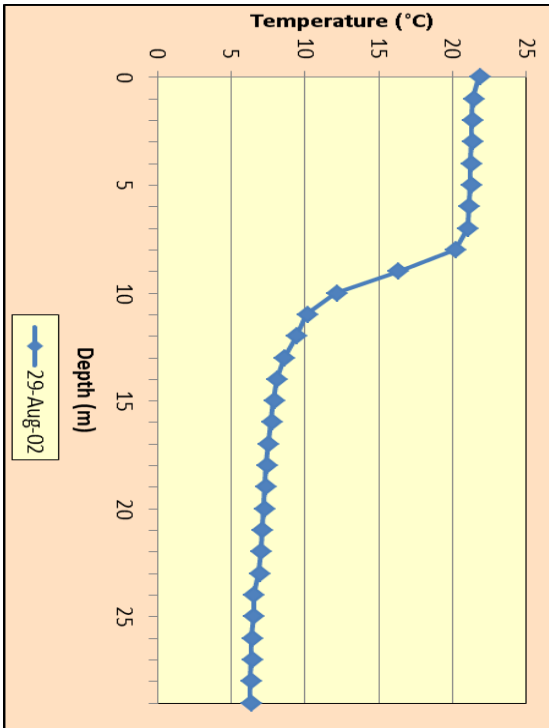


Figure 13. Dissolved Oxygen Profile: Kawagama Lake Basin 6.

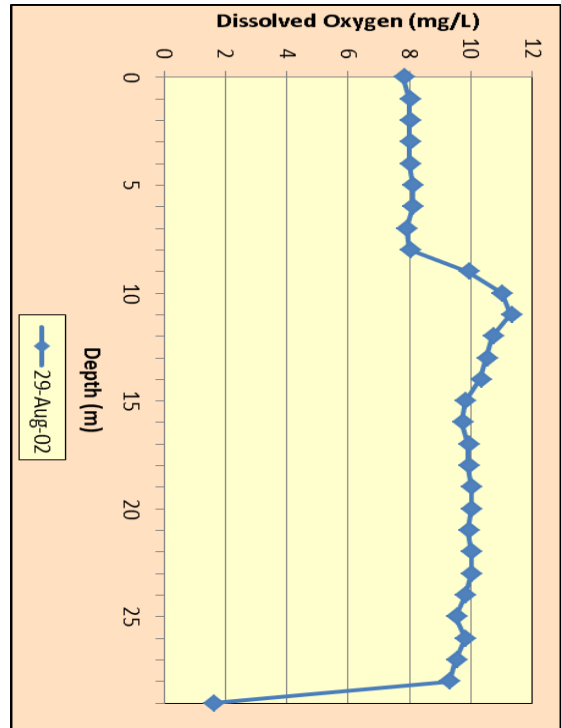


Figure 14. Temperature Profile: Kawagama Lake Basin 7.

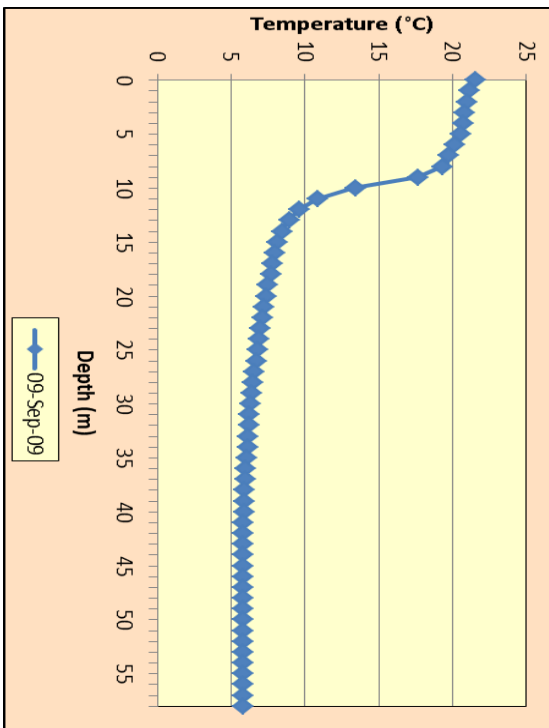


Figure 15. Dissolved Oxygen Profile: Kawagama Lake Basin 7.

