Mount Polley Mining Corporation
an Imperial Metals company
Box 12 • Likely, BC V0L 1N0 • T 250.790.2215 • F 250.790.2613

November 12, 2015

2015 Third Quarter Report for Post-TSF Breach Monitoring – Cover Memorandum

Under the Amended Pollution Abatement Order 107461, issued to Mount Polley Mining Corporation (MPMC) by the BC Ministry of Environment (MoE) following a failure of the Mount Polley Mine Tailings Storage Facility on August 4, 2014, MPMC is required to provide quarterly data reports to MoE.

This quarterly report includes data collected in the third quarter of 2015 (July - September) under the "2015 Post-TSF Breach Monitoring Plan", which was submitted to and approved by MoE in the first quarter of 2015. It is important to note that only raw data are presented in this report. MPMC has made this information public in an effort to continue open and transparent communication; however, it is recommended that data interpretation only be completed by Qualified Professionals.

A Post-Event Environmental Impact Assessment Report (PEEIAR) was submitted to MoE on June 6, 2015 containing interpreted data and detailing preliminary findings from environmental monitoring results following the tailings dam failure. The scope of the PEEIAR included chemical, physical and biological impacts. Interpretation of the data presented in this report, in addition to other data collected since submission of the PEEIAR, will be provided in a Progress Report to MoE, which is due December 31, 2015.

Additional information on activities related to the tailings dam failure response, including rehabilitation work and environmental monitoring, is available on the Imperial Metals Corporation Mount Polley Updates webpage.

Please direct any questions to inquiries@imperialmetals.com.

Mount Polley Mining Corporation
IMPERIAL METALS CORPORATION

November 12, 2015

Via Email: Hubert Bunce
A/Director, Mount Polley
BC Ministry of Environment
Environmental Protection, Regional Operations

RE: Third Quarter 2015 Report for Post TSF-Breach Monitoring Plan

Mount Polley Mining Corporation (MPMC) is pleased to present this third quarter Post TSF-Breach Monitoring report for 2015 as required under Pollution Abatement Order 107461, May 27, 2015. Surface water monitoring was conducted throughout this time period as specified in the *2015 Post TSF- Breach Monitoring Plan*. Sampling events are outlined in Table 1.

With regard to the *2015 Post TSF- Breach Monitoring Plan* the following items should be noted:

- Hydrological monitoring was conducted at four stations (Polley Lake Weir, Upper Hazeltine, Lower Hazeltine, and Lower Edney).
- Climate data including temperature, wind direction, rainfall, wind speed, and snowpack were collected. Solar radiation and relative humidity data were also collected to allow for calculation of evaporation rates. These data will be reported in the 2015 Progress Report.
- There were 113 surface water quality sampling and/or profile monitoring events.
- Quality assurance monitoring incorporates all water quality samples taken, including Permit 11678 sites. These data will be reported in the 2015 Progress Report.
- Supplemental monitoring results will be presented in the December 31, 2015 Progress Report.
- For water balance information, refer to the “Third Quarter 2015 Report for Permit 11678”.

This report includes the following sections for water quality:

- Appendix 1: Water quality analysis
- Appendix 2: In-situ data
- Appendix 3: Hydrology results

Table 1: Sampling events in the third quarter 2015

Site Name	BC EMS Code	Full Sample Suite Frequency	Required	Completed
HAC-10	E303010	Monthly	3	3
HAC-05	E303012	Monthly	3	3
HAC-08	E303013	Monthly	3	3
HAC-01b	E301410	Weekly [1]	4	4
HAC-01c	E303953	Weekly [2]	8	9
EDC-01	E303014	Monthly [1]	1	3
EDC-02	E303015	Weekly [1]	4	4
QUL-54	E303016	Profile Only [3]	4	4
QUL-55	E303017	Weekly	4	4
QUL-56	E303018	Profile Only [3]	4	4
QUL-54a	E303950	Profile Only [3,4]	8	9
QUL-55a	E303951	Weekly	8	11
QUL-56a	E303952	Profile Only [3,4]	8	9
QUL-18	E303019	Weekly/Monthly [5]	3	3
QUL-2a	E303020	Weekly/Monthly [5]	3	3
QUL-40a	E303021	Monthly	3	3
QUL-120a	E303022	Monthly	3	3
QUL-21a	E303023	Profile Only [6]	6	5 [7]
QUL-66a	E303024	Profile Only [6]	6	7
QUL-79	E303025	Profile Only [6]	6	7
QUR-1	E303026	Weekly/bi-weekly [8]	6	6
P1	E207974	Monthly	3	3
P2	E207975	Monthly	3	3

[1] Discontinued when Edney Creek redirected on July 25, 2015
[2] Established July 31, 2015
[3] Only sample if in-situ parameters are different than QUL-55/QUL-55a, profile weekly
[4] Established July 28, 2015
[5] Weekly during spring overturn, monthly after spring overturn
[6] Weekly during spring overturn, bi-monthly after spring overturn
[7] One profile not completed
[8] Weekly during spring overturn, bi-weekly after spring overturn

Sincerely,

Colleen Hughes, EP
Environmental Coordinator
Mount Polley Mining Corporation
250-790-2617

Appendix 1

Appendix 1
EDC-01 (Edney Creek Upstream of Confluence with Hazeltine)

Date Sampled	7-Jul-15	31-Aug-15	8-Sep-15
Physical Tests			
Conductivity (µS/cm)	352	413	390
Hardness (as CaCO3)	173	208	196
pH	8.31	8.23	8.26
Total Suspended Solids	<3.0	<3.0	<3.0
Total Dissolved Solids	242	247	261
Turbidity (ntu)	0.88	1.59	2.62
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	162	203	191
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050
Chloride (Cl)	1.26	1.71	2.03
Fluoride (F)	0.122	0.134	0.127
Nitrate and Nitrite (as N)	0.0283	0.0094	<0.0051
Nitrate (as N)	0.0283	0.0094	<0.0050
Nitrite (as N)	<0.0010	<0.0010	0.001
Total Nitrogen	0.245	0.156	0.212
Orthophosphate-Dissolved (as P)	0.0012	0.0034	0.014
Phosphorus (P)-Total Dissolved	0.0043	0.0063	0.0175
Phosphorus (P)-Total	0.0061	0.0087	0.0242
Sulfate (SO4)	31.5	26.6	25.4
Organic / Inorganic Carbon			
Dissolved Organic Carbon	6.83	4.67	6.19
Total Metals			
Aluminum (Al)-Total	0.054	0.0551	0.168
Antimony (Sb)-Total	0.00032	0.00013	0.0001
Arsenic (As)-Total	0.00104	0.00135	0.00191
Barium (Ba)-Total	0.0384	0.0435	0.0391
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.03	0.033	0.034
Cadmium (Cd)-Total	0.0000122	0.0000086	0.0000091
Calcium (Ca)-Total	50.4	54.6	51.9
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	0.00016
Copper (Cu)-Total	0.0137	0.0106	0.0101
Iron (Fe)-Total	0.055	0.059	0.2
Lead (Pb)-Total	<0.000050	<0.000050	0.000098
Lithium (Li)-Total	0.0014	0.0012	0.0014
Magnesium (Mg)-Total	12.2	15.3	16.3
Manganese (Mn)-Total	0.019	0.00714	0.0193
Mercury (Hg) - Total	<0.0000050	-	-
Molybdenum (Mo)-Total	0.00674	0.00607	0.00496
Nickel (Ni)-Total	0.00065	0.00059	0.00079
Potassium (K)-Total	1.71	1.76	1.76
Selenium (Se)-Total	0.000522	0.000425	0.000489
Silicon (Si)-Total	5.53	5.31	5.67
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	11	14.2	13.4
Strontium (Sr)-Total	0.339	0.384	0.379
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	0.012
Uranium (U)-Total	0.000717	0.00101	0.000878
Vanadium (V)-Total	0.00132	0.00135	0.0013
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030
Dissolved Metals			
Aluminum (Al)-Dissolved	0.0068	0.0082	0.0075
Antimony (Sb)-Dissolved	0.00018	0.00011	<0.00010
Arsenic (As)-Dissolved	0.00093	0.00127	0.00179
Barium (Ba)-Dissolved	0.037	0.0441	0.0359
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.028	0.029	0.028
Cadmium (Cd)-Dissolved	0.0000093	0.0000098	<0.0000050
Calcium (Ca)-Dissolved	49.4	57.4	51.9
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.0119	0.00951	0.00628
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	0.0015	0.0011	0.0011
Magnesium (Mg)-Dissolved	12.1	15.6	16.1
Manganese (Mn)-Dissolved	0.0159	0.0051	0.0126
Mercury (Hg) - Dissolved	<0.0000050	-	-
Molybdenum (Mo)-Dissolved	0.00641	0.00616	0.0044
Nickel (Ni)-Dissolved	0.00059	<0.00050	0.00053
Potassium (K)-Dissolved	1.64	1.74	1.72
Selenium (Se)-Dissolved	0.000581	0.000475	0.000428
Silicon (Si)-Dissolved	5.39	5.31	5.19
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	10.6	13.8	13.1
Strontium (Sr)-Dissolved	0.33	0.383	0.364
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000683	0.000981	0.000806
Vanadium (V)-Dissolved	0.00111	0.00094	0.00078
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

EDC-02 (Edney Creek Below Confluence with Hazeltine)

Date Sampled	7-Jul-15	13-Jul-15	16-Jul-15	23-Jul-15
Physical Tests				
Conductivity (µS/cm)	309	145	119	305
Hardness (as CaCO3)	148.0	63.8	59.0	148.0
pH	8.29	7.98	7.94	8.21
Total Suspended Solids	68.6	15.2	<3.0	05.0
Total Dissolved Solids	204	097	056	190
Turbidity (ntu)	6.97	1.40	1.03	2.73
Anions and Nutrients				
Alkalinity, Total (as CaCO3)	123.0	58.8	50.7	112.0
Ammonia, Total (as N)	0.0102	<0.0050	<0.0050	<0.0050
Chloride (Cl)	1.18	<0.50	<0.50	1.27
Fluoride (F)	0.105	0.046	0.039	0.101
Nitrate and Nitrite (as N)	0.0495	0.0546	0.0601	0.0153
Nitrate (as N)	0.0495	0.0546	0.0601	0.0153
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.339	0.145	0.144	0.273
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	0.0047	<0.0020	<0.0020	0.0053
Phosphorus (P)-Total	0.0217	0.0038	0.0030	0.0109
Sulfate (SO4)	42.0	13.7	08.9	43.8
Organic / Inorganic Carbon				
Dissolved Organic Carbon	5.21	2.67	1.88	5.32
Total Metals				
Aluminum (Al)-Total	0.446	0.066	0.087	0.251
Antimony (Sb)-Total	0.00037	<0.00010	<0.00010	0.00016
Arsenic (As)-Total	0.00158	0.00029	0.00023	0.00129
Barium (Ba)-Total	0.0379	0.0091	0.0086	0.0301
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	0.000097	<0.000050
Boron (B)-Total	0.031	<0.010	<0.010	0.028
Cadmium (Cd)-Total	0.0000177	<0.0000050	0.0000073	0.0000088
Calcium (Ca)-Total	44.8	19.8	19.4	42.8
Chromium (Cr)-Total	0.00056	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	0.00034	<0.00010	<0.00010	0.00023
Copper (Cu)-Total	0.0257	0.0041	0.0049	0.0199
Iron (Fe)-Total	0.444	0.063	0.085	0.323
Lead (Pb)-Total	0.000230	<0.000050	<0.000050	0.000187
Lithium (Li)-Total	0.002	0.001	<0.0010	0.0014
Magnesium (Mg)-Total	8.50	2.69	2.42	7.56
Manganese (Mn)-Total	0.0649	0.0139	0.0384	0.0411
Mercury (Hg) - Total	0.00001	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	0.01080	0.00183	0.00091	0.00997
Nickel (Ni)-Total	0.00094	<0.00050	0.00052	0.00061
Potassium (K)-Total	1.740	0.631	0.593	1.430
Selenium (Se)-Total	0.000933	0.000224	0.000179	0.000893
Silicon (Si)-Total	5.16	2.03	1.99	3.90
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	10.30	2.04	1.44	10.10
Strontium (Sr)-Total	0.377	0.157	0.138	0.331
Thallium (Tl)-Total	<0.000010	<0.000010	0.000028	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	0.020000	<0.010	<0.010	0.015000
Uranium (U)-Total	0.00071	0.00022	0.00024	0.00051
Vanadium (V)-Total	0.0025	<0.00050	<0.00050	0.0020
Zinc (Zn)-Total	0.0041	<0.0030	<0.0030	0.0039
Dissolved Metals				
Aluminum (Al)-Dissolved	0.0109	0.0089	0.0131	0.0102
Antimony (Sb)-Dissolved	0.00021	<0.00010	<0.00010	0.00016
Arsenic (As)-Dissolved	0.00126	0.00030	0.00019	0.00121
Barium (Ba)-Dissolved	0.0319	0.00925	0.00787	0.0275
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.0260000	<0.010	<0.010	0.0270000
Cadmium (Cd)-Dissolved	0.000014	<0.0000050	0.000006	0.000006
Calcium (Ca)-Dissolved	45.5	20.8	19.7	46.6
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.01310	0.00278	0.00267	0.01300
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	0.0015	0.0010	<0.0010	0.0013
Magnesium (Mg)-Dissolved	8.45	2.88	2.41	7.77
Manganese (Mn)-Dissolved	0.04140	0.00982	0.02710	0.02750
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	0.0102	0.0020	0.0009	0.0102
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.60	0.66	0.54	1.41
Selenium (Se)-Dissolved	0.000978	0.000264	0.000167	0.000883
Silicon (Si)-Dissolved	4.33	1.98	1.79	3.56
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	10	2.3	1.47	10.4
Strontium (Sr)-Dissolved	0.361	0.159	0.136	0.357
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000671	0.000220	0.000245	0.000508
Vanadium (V)-Dissolved	0.00138	<0.00050	<0.00050	0.00119
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

HAC-01b (Mouth of Hazeltine Creek at Quesnel Lake)

Date Sampled	7-Jul-15	13-Jul-15	16-Jul-15	23-Jul-15
Physical Tests				
Conductivity (µS/cm)	335	321	320	318
Hardness (as CaCO3)	155	148	152	153
pH	8.32	8.24	8.28	8.24
Total Suspended Solids	11.1	<3.0	05.9	06.0
Total Dissolved Solids	240	234	180	200
Turbidity (ntu)	7.13	12.50	3.29	3.30
Anions and Nutrients				
Alkalinity, Total (as CaCO3)	130	118	112	118
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	1.37	1.37	1.39	1.35
Fluoride (F)	0.123	0.114	0.116	0.105
Nitrate and Nitrite (as N)	0.057	0.022	0.017	0.013
Nitrate (as N)	0.057	0.022	0.017	0.013
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.342	0.301	0.294	0.280
Orthophosphate-Dissolved (as P)	0.0012	<0.0010	<0.0010	0.0013
Phosphorus (P)-Total Dissolved	0.0068	0.0046	0.0061	0.0061
Phosphorus (P)-Total	0.0218	0.0244	0.0138	0.0119
Sulfate (SO4)	49.3	50.0	50.7	47.0
Organic / Inorganic Carbon				
Dissolved Organic Carbon	6.01	6.23	5.37	5.68
Total Metals				
Aluminum (Al)-Total	0.35	0.67	0.31	0.17
Antimony (Sb)-Total	0.00040	0.00021	0.00018	0.00018
Arsenic (As)-Total	0.00186	0.00162	0.00145	0.00137
Barium (Ba)-Total	0.0393	0.0383	0.0326	0.0316
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.035	0.031	0.032	0.030
Cadmium (Cd)-Total	0.0000146	0.0000116	0.0000150	0.0000104
Calcium (Ca)-Total	47.5	44.7	47.2	47.0
Chromium (Cr)-Total	<0.00050	0.00080	<0.00050	<0.00050
Cobalt (Co)-Total	0.00032	0.00053	0.00023	0.00015
Copper (Cu)-Total	0.0293	0.0341	0.0218	0.0190
Iron (Fe)-Total	0.37	0.67	0.28	0.20
Lead (Pb)-Total	0.00022	0.00030	0.00013	0.00010
Lithium (Li)-Total	0.0021	0.0019	0.0015	0.0014
Magnesium (Mg)-Total	8.66	7.90	7.91	8.12
Manganese (Mn)-Total	0.057	0.044	0.037	0.034
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	0.0129	0.0121	0.0120	0.0111
Nickel (Ni)-Total	0.00084	0.00109	0.00066	0.00053
Potassium (K)-Total	1.8400	1.6800	1.6900	1.5100
Selenium (Se)-Total	0.00120	0.00121	0.00108	0.00094
Silicon (Si)-Total	5.16	5.28	4.62	4.00
Silver (Ag)-Total	0.000011	0.000013	<0.000010	<0.000010
Sodium (Na)-Total	11.60	10.50	11.30	11.30
Strontium (Sr)-Total	0.4160	0.3800	0.3830	0.3610
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	0.0180	0.0340	0.0180	0.0110
Uranium (U)-Total	0.00069	0.00060	0.00058	0.00053
Vanadium (V)-Total	0.0026	0.0031	0.0022	0.0018
Zinc (Zn)-Total	0.0044	0.0048	0.0033	0.0057
Dissolved Metals				
Aluminum (Al)-Dissolved	0.01120	0.01210	0.01320	0.01140
Antimony (Sb)-Dissolved	0.00024	0.00019	0.00017	0.00017
Arsenic (As)-Dissolved	0.0015	0.0013	0.0013	0.0012
Barium (Ba)-Dissolved	0.0341	0.0304	0.0284	0.0287
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.0300	0.0290	0.0290	0.0280
Cadmium (Cd)-Dissolved	0.0000147	0.0000063	0.0000068	0.0000086
Calcium (Ca)-Dissolved	48.2	46.2	47.8	47.9
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.017	0.014	0.014	0.013
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	0.0016	0.0014	0.0011	0.0012
Magnesium (Mg)-Dissolved	8.50	7.90	7.87	8.11
Manganese (Mn)-Dissolved	0.03480	0.01780	0.02030	0.02290
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	0.0122	0.0118	0.0113	0.0107
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.76	1.52	1.57	1.45
Selenium (Se)-Dissolved	0.00121	0.00122	0.00114	0.00101
Silicon (Si)-Dissolved	4.40	4.17	4.01	3.64
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	11.1	10.4	11	11
Strontium (Sr)-Dissolved	0.398	0.381	0.378	0.358
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000624	0.000553	0.000538	0.000495
Vanadium (V)-Dissolved	0.0016	0.0014	0.0014	0.0013
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	0.0050

Note: Units are mg/L unless otherwise stated

HAC-01c (Mouth of Hazeltine Creek at Quesnel Lake)

Date Sampled	30-Jul-15	6-Aug-15	13-Aug-15	31-Aug-15	3-Sep-15	8-Sep-15	15-Sep-15	22-Sep-15	28-Sep-15
Physical Tests									
Conductivity (µS/cm)	324	339	349	400	409	406	421	440	426
Hardness (as CaCO3)	159	152	161	200	200	196	203	223	213
pH	8.23	8.25	8.34	8.35	8.28	8.33	8.37	8.34	8.28
Total Suspended Solids	185	5.8	16.9	7.8	13.1	10.7	<3.0	9.9	<3.0
Total Dissolved Solids	227	225	228	255	275	255	267	291	382
Turbidity (ntu)	64.9	4.61	8.06	3.45	16.6	8.04	0.76	6.22	0.75
Anions and Nutrients									
Alkalinity, Total (as CaCO3)	124	129	135	167	168	170	175	162	170
Ammonia, Total (as N)	0.0086	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	1.41	1.34	1.48	1.51	1.55	1.47	1.59	1.53	1.6
Fluoride (F)	0.104	0.113	0.122	0.138	0.135	0.132	0.139	0.134	0.133
Nitrate and Nitrite (as N)	0.0174	0.0072	0.0179	0.0215	0.0352	0.0196	0.0168	0.253	0.0316
Nitrate (as N)	0.0174	0.0072	0.0179	0.0215	0.0352	0.0182	0.0168	0.253	0.0316
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.282	0.254	0.214	0.182	0.188	0.181	0.173	0.403	0.189
Orthophosphate-Dissolved (as P)	0.0014	<0.0010	0.0015	<0.0010	0.0024	0.0017	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	0.0052	0.0039	0.0028	0.0043	0.0047	0.0037	0.0022	0.0031	0.0026
Phosphorus (P)-Total	0.261	0.0154	0.0192	0.0131	0.0204	0.0176	0.0056	0.0151	0.0041
Sulfate (SO4)	48.8	47.6	48	49.9	54.7	50.3	55.6	76.4	62.4
Organic / Inorganic Carbon									
Dissolved Organic Carbon	6.28	5.39	4.73	4.27	4.32	4.45	4.3	4.7	4.31
Total Metals									
Aluminum (Al)-Total	3.54	0.275	0.446	0.209	0.725	0.436	0.0649	0.39	0.046
Antimony (Sb)-Total	0.00029	0.00019	0.00019	0.0002	0.00019	0.00017	0.00018	0.00016	0.00015
Arsenic (As)-Total	0.00314	0.0014	0.00156	0.00154	0.00173	0.00165	0.00149	0.00154	0.00132
Barium (Ba)-Total	0.0746	0.0344	0.0387	0.0452	0.0507	0.0452	0.0414	0.0446	0.0408
Beryllium (Be)-Total	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.036	0.029	0.033	0.036	0.032	0.038	0.037	0.033	0.038
Cadmium (Cd)-Total	0.0000529	0.0000112	0.0000155	0.0000196	0.0000227	0.00002	0.0000091	0.0000188	0.0000151
Calcium (Ca)-Total	53.2	48.5	50.2	59.2	62.3	56	61.5	62.2	62.5
Chromium (Cr)-Total	0.00491	<0.00050	0.00076	<0.00050	0.00091	0.00061	<0.00050	0.0007	<0.00050
Cobalt (Co)-Total	0.00273	0.00021	0.00037	0.00019	0.00054	0.00039	0.00012	0.00036	<0.00010
Copper (Cu)-Total	0.0643	0.0202	0.0206	0.0164	0.0273	0.0236	0.0137	0.0182	0.0125
Iron (Fe)-Total	5.12	0.29	0.661	0.269	0.855	0.529	0.095	0.485	0.08
Lead (Pb)-Total	0.00161	0.000124	0.000238	0.000105	0.000328	0.000229	<0.000050	0.000199	<0.000050
Lithium (Li)-Total	0.005	0.0016	0.0017	0.0021	0.0027	0.0023	0.002	0.0026	0.0023
Magnesium (Mg)-Total	10.3	8.32	9.63	13.1	13.6	12.6	13.4	13.5	13.9
Manganese (Mn)-Total	0.155	0.05	0.0595	0.0892	0.124	0.125	0.0993	0.0827	0.0962
Mercury (Hg) - Total	0.0000118	<0.0000050	-	-	-	-	-	-	-
Molybdenum (Mo)-Total	0.0112	0.0118	0.0116	0.0107	0.0107	0.01	0.0114	0.0143	0.0119
Nickel (Ni)-Total	0.00543	0.00071	0.00106	0.0007	0.00131	0.00094	0.00062	0.00125	0.00053
Potassium (K)-Total	2.11	1.78	1.72	1.82	1.84	1.67	1.76	1.64	1.65
Selenium (Se)-Total	0.001	0.000947	0.000949	0.000924	0.00104	0.00095	0.000999	0.00253	0.0013
Silicon (Si)-Total	9.66	3.57	4.32	4.93	6.44	5.39	4.94	4.97	4.94
Silver (Ag)-Total	0.000038	<0.000010	<0.000010	<0.000010	0.000011	0.000013	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	10.8	11.7	11.7	14.2	13.3	13.4	15	14.6	15.1
Strontium (Sr)-Total	0.4	0.398	0.426	0.458	0.479	0.479	0.52	0.537	0.558
Thallium (Tl)-Total	0.000025	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000011	<0.000010
Tin (Sn)-Total	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	0.202	0.013	0.022	0.014	0.036	0.023	<0.010	0.022	<0.010
Uranium (U)-Total	0.000746	0.000689	0.00079	0.00138	0.0013	0.00135	0.00127	0.00136	0.00136
Vanadium (V)-Total	0.0112	0.00195	0.00255	0.00181	0.00296	0.00221	0.00145	0.00192	0.0012
Zinc (Zn)-Total	0.0141	<0.0030	0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0047
Dissolved Metals									
Aluminum (Al)-Dissolved	0.0113	0.0114	0.0126	0.009	0.0161	0.018	0.005	0.0062	0.0046
Antimony (Sb)-Dissolved	0.00018	0.00017	0.00018	0.00018	0.00016	0.00014	0.00015	0.00014	0.00013
Arsenic (As)-Dissolved	0.00117	0.00119	0.00115	0.00133	0.00122	0.00134	0.00135	0.00126	0.00126
Barium (Ba)-Dissolved	0.0289	0.031	0.0328	0.0418	0.0394	0.0398	0.0394	0.0411	0.039
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.027	0.03	0.031	0.032	0.032	0.033	0.034	0.032	0.035
Cadmium (Cd)-Dissolved	0.0000083	0.0000082	0.0000086	0.0000137	<0.000020	0.0000099	0.000014	0.0000152	0.0000131
Calcium (Ca)-Dissolved	49.8	47.4	49.3	59	59.1	57.7	60.1	66.2	62.8
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010
Copper (Cu)-Dissolved	0.0114	0.0126	0.0112	0.0115	0.0104	0.0104	0.0105	0.0109	0.0109
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	<0.0010	0.0014	0.0012	0.0019	0.0021	0.0019	0.0018	0.0022	0.0022
Magnesium (Mg)-Dissolved	8.35	8.16	9.18	12.9	12.7	12.6	13	14.1	13.6
Manganese (Mn)-Dissolved	0.0444	0.0319	0.0364	0.0774	0.0841	0.108	0.0899	0.072	0.091
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.011	0.0117	0.0111	0.0105	0.0105	0.00963	0.0111	0.0142	0.0108
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00055	0.00062	<0.00050
Potassium (K)-Dissolved	1.5	1.7	1.65	1.75	1.6	1.62	1.7	1.62	1.62
Selenium (Se)-Dissolved	0.000985	0.000907	0.00086	0.000937	0.00102	0.000952	0.000937	0.00267	0.00121
Silicon (Si)-Dissolved	3.19	3.07	3.39	4.45	4.69	4.51	4.67	4.4	4.76
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	10.6	11.3	11.4	13.9	12.7	13.4	14.3	15.3	14.8
Strontium (Sr)-Dissolved	0.374	0.39	0.408	0.447	0.461	0.475	0.505	0.546	0.534
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000018	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000565	0.000682	0.000771	0.00132	0.00125	0.00128	0.00124	0.00134	0.00126
Vanadium (V)-Dissolved	0.00128	0.0012	0.00122	0.00109	0.00105	0.00104	0.00098	0.0009	0.00097
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0039

Note: Units are mg/L unless otherwise stated

HAC-05 (Hazeltine Creek at Gavin Lake Bridge)

Date Sampled	7-Jul-15	6-Aug-15	8-Sep-15
Physical Tests			
Conductivity (µS/cm)	293	300	373
Hardness (as CaCO3)	133	137	187
pH	8.45	8.40	8.37
Total Suspended Solids	23.1	<3.0	<3.0
Total Dissolved Solids	201	206	247
Turbidity (ntu)	4.16	1.47	0.94
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	104	110	157
Ammonia, Total (as N)	0.0054	<0.0050	<0.0050
Chloride (Cl)	1.32	1.33	1.75
Fluoride (F)	0.099	0.093	0.120
Nitrate and Nitrite (as N)	0.023	<0.0051	0.009
Nitrate (as N)	0.023	<0.0050	0.009
Nitrite (as N)	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.401	0.301	0.250
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	0.0089	0.0065	0.0040
Phosphorus (P)-Total	0.0383	0.0072	0.0047
Sulfate (SO4)	47.0	45.7	42.6
Organic / Inorganic Carbon			
Dissolved Organic Carbon	6.66	6.46	5.81
Total Metals			
Aluminum (Al)-Total	0.361	0.068	0.031
Antimony (Sb)-Total	0.00029	0.00016	0.00015
Arsenic (As)-Total	0.00125	0.00112	0.00102
Barium (Ba)-Total	0.0246	0.0188	0.0297
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.029	0.027	0.033
Cadmium (Cd)-Total	0.0000063	<0.0000050	<0.0000050
Calcium (Ca)-Total	39.9	45.1	55.2
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	0.00027	<0.00010	<0.00010
Copper (Cu)-Total	0.0175	0.0089	0.0099
Iron (Fe)-Total	0.34	0.07	0.09
Lead (Pb)-Total	0.000125	<0.000050	<0.000050
Lithium (Li)-Total	0.0013	<0.0010	0.0010
Magnesium (Mg)-Total	6.090	6.290	10.500
Manganese (Mn)-Total	0.038	0.014	0.032
Mercury (Hg) - Total	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Total	0.01110	0.01160	0.01040
Nickel (Ni)-Total	0.00061	<0.00050	<0.00050
Potassium (K)-Total	1.520	1.570	1.480
Selenium (Se)-Total	0.00092	0.00091	0.00099
Silicon (Si)-Total	4.230	2.860	4.770
Silver (Ag)-Total	00.0	<0.000010	<0.000010
Sodium (Na)-Total	9.35	10.60	12.30
Strontium (Sr)-Total	0.312	0.341	0.417
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	0.020000	<0.010	<0.010
Uranium (U)-Total	0.00032	0.00036	0.00064
Vanadium (V)-Total	0.0022	0.0016	0.0011
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030
Dissolved Metals			
Aluminum (Al)-Dissolved	0.00850	0.00520	<0.0030
Antimony (Sb)-Dissolved	0.00019	0.00014	0.00011
Arsenic (As)-Dissolved	0.0011	0.0011	0.0010
Barium (Ba)-Dissolved	0.0196	0.0173	0.0292
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.0270000	0.0270000	0.0290000
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	42.9	44.6	57.2
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00729	0.00599	0.00850
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	<0.0010	0.001	<0.0010
Magnesium (Mg)-Dissolved	6.39	6.17	10.70
Manganese (Mn)-Dissolved	0.0110	0.0036	0.0270
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Dissolved	0.0116	0.0114	0.0096
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.53	1.49	1.48
Selenium (Se)-Dissolved	0.00104	0.000852	0.00107
Silicon (Si)-Dissolved	3.75	2.71	4.64
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.94	10.1	12.1
Strontium (Sr)-Dissolved	0.328	0.334	0.41
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000309	0.000354	0.000591
Vanadium (V)-Dissolved	0.00141	0.00136	0.00095
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

HAC-08 (Hazeltine Creek upstream of Ditch Road Bridge)

Date Sampled	7-Jul-15	6-Aug-15	8-Sep-15
Physical Tests			
Conductivity (µS/cm)	311	329	411
Hardness (as CaCO3)	143	149	204
pH	8.34	8.28	8.45
Total Suspended Solids	58.5	4.3	71.4
Total Dissolved Solids	209	208	280
Turbidity (ntu)	5.52	1.26	43.4
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	114	122	164
Ammonia, Total (as N)	0.0056	<0.0050	<0.0050
Chloride (Cl)	1.35	1.34	1.45
Fluoride (F)	0.114	0.11	0.149
Nitrate and Nitrite (as N)	0.0215	<0.0051	0.135
Nitrate (as N)	0.0215	<0.0050	0.135
Nitrite (as N)	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.381	0.232	0.405
Orthophosphate-Dissolved (as P)	0.0034	0.0015	0.0058
Phosphorus (P)-Total Dissolved	0.01	0.0054	0.0078
Phosphorus (P)-Total	0.151	0.0106	0.149
Sulfate (SO4)	49.3	49.6	58.8
Organic / Inorganic Carbon			
Dissolved Organic Carbon	6.03	5.60	4.37
Total Metals			
Aluminum (Al)-Total	0.878	0.111	2.8
Antimony (Sb)-Total	0.00037	0.0002	0.00026
Arsenic (As)-Total	0.00225	0.00134	0.00416
Barium (Ba)-Total	0.044	0.0304	0.0783
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.033	0.031	0.044
Cadmium (Cd)-Total	0.0000227	0.0000069	0.0000438
Calcium (Ca)-Total	46.3	48.5	56.7
Chromium (Cr)-Total	0.00081	<0.00050	0.00394
Cobalt (Co)-Total	0.00067	<0.00010	0.00247
Copper (Cu)-Total	0.0552	0.0194	0.0533
Iron (Fe)-Total	0.983	0.096	3.49
Lead (Pb)-Total	0.000492	0.000052	0.00133
Lithium (Li)-Total	0.002	0.0016	0.0059
Magnesium (Mg)-Total	7.77	7.78	13.5
Manganese (Mn)-Total	0.0435	0.00526	0.0972
Mercury (Hg) - Total	0.0000085	<0.0000050	-
Molybdenum (Mo)-Total	0.0121	0.0127	0.0126
Nickel (Ni)-Total	0.00119	<0.00050	0.00522
Potassium (K)-Total	1.92	1.8	2.18
Selenium (Se)-Total	0.00116	0.00103	0.00208
Silicon (Si)-Total	5.85	3.36	10.3
Silver (Ag)-Total	0.000026	<0.000010	0.000031
Sodium (Na)-Total	10.8	12.1	16
Strontium (Sr)-Total	0.396	0.413	0.54
Thallium (Tl)-Total	<0.000010	<0.000010	0.000029
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	0.051	<0.010	0.14
Uranium (U)-Total	0.000535	0.000639	0.00155
Vanadium (V)-Total	0.00456	0.00163	0.0093
Zinc (Zn)-Total	0.0033	<0.0030	0.0122
Dissolved Metals			
Aluminum (Al)-Dissolved	0.0126	0.0106	0.0096
Antimony (Sb)-Dissolved	0.00022	0.00017	0.00016
Arsenic (As)-Dissolved	0.00137	0.00117	0.00181
Barium (Ba)-Dissolved	0.0282	0.0279	0.0348
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.028	0.031	0.039
Cadmium (Cd)-Dissolved	0.0000086	0.000006	0.0000084
Calcium (Ca)-Dissolved	45.2	47.3	59.7
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	0.0003
Copper (Cu)-Dissolved	0.015	0.0129	0.0107
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	0.0014	0.0014	0.0036
Magnesium (Mg)-Dissolved	7.38	7.6	13.2
Manganese (Mn)-Dissolved	0.00585	0.00136	0.0104
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Dissolved	0.0125	0.0122	0.0131
Nickel (Ni)-Dissolved	<0.00050	<0.00050	0.00114
Potassium (K)-Dissolved	1.67	1.68	1.65
Selenium (Se)-Dissolved	0.00125	0.000948	0.0024
Silicon (Si)-Dissolved	4.18	3.1	5.16
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	10.6	11.3	15.9
Strontium (Sr)-Dissolved	0.38	0.399	0.519
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000449	0.000599	0.00139
Vanadium (V)-Dissolved	0.0016	0.00125	0.00119
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

HAC-10 (Outlet of Polley Lake at Weir)

Date Sampled	7-Jul-15	6-Aug-15	8-Sep-15
Physical Tests			
Conductivity (µS/cm)	285	285	289
Hardness (as CaCO3)	130	126	137
pH	8.46	8.26	8.11
Total Suspended Solids	10.4	4.9	4.3
Total Dissolved Solids	202	196	201
Turbidity (ntu)	3.01	2.85	1.27
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	101.0	98.0	99.1
Ammonia, Total (as N)	0.0063	<0.0050	<0.0050
Chloride (Cl)	1.29	1.27	1.36
Fluoride (F)	0.090	0.085	0.090
Nitrate and Nitrite (as N)	<0.0051	<0.0051	0.010
Nitrate (as N)	<0.0050	<0.0050	0.009
Nitrite (as N)	<0.0010	<0.0010	0.0013
Total Nitrogen	0.388	0.331	0.392
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	0.0096	0.0061	0.0058
Phosphorus (P)-Total	0.0241	0.0128	0.0121
Sulfate (SO4)	46.9	47.1	48.3
Organic / Inorganic Carbon			
Dissolved Organic Carbon	7.51	6.58	7.09
Total Metals			
Aluminum (Al)-Total	0.193	0.149	0.086
Antimony (Sb)-Total	0.00029	0.00015	0.00016
Arsenic (As)-Total	0.00113	0.00110	0.00123
Barium (Ba)-Total	0.0169	0.0162	0.0160
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.029	0.027	0.033
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	42.0	42.3	43.0
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	0.00016	0.00012	0.00010
Copper (Cu)-Total	0.0089	0.0075	0.0067
Iron (Fe)-Total	0.161	0.105	0.107
Lead (Pb)-Total	0.000071	<0.000050	<0.000050
Lithium (Li)-Total	0.0011	0.001	<0.0010
Magnesium (Mg)-Total	6.06	5.87	6.00
Manganese (Mn)-Total	0.0216	0.0184	0.0368
Mercury (Hg) - Total	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Total	0.01140	0.01150	0.01130
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	1.460000	1.550000	1.450000
Selenium (Se)-Total	0.0009	0.0009	0.0009
Silicon (Si)-Total	3.86	3.54	3.29
Silver (Ag)-Total	<0.000010	<0.000010	0.000013
Sodium (Na)-Total	9.63	10.10	10.20
Strontium (Sr)-Total	0.322	0.321	0.329
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010
Uranium (U)-Total	0.00029	0.00031	0.00030
Vanadium (V)-Total	0.00162	0.00157	0.00129
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030
Dissolved Metals			
Aluminum (Al)-Dissolved	0.0061	0.0065	0.0063
Antimony (Sb)-Dissolved	0.00017	0.00013	0.00012
Arsenic (As)-Dissolved	0.00099	0.00100	0.00111
Barium (Ba)-Dissolved	0.0135	0.0131	0.0142
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.028	0.027	0.027
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	42.3	41.3	44.8
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00317	0.00328	0.00419
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	0.0011	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	5.95	5.61	6.09
Manganese (Mn)-Dissolved	0.00594	0.00046	0.02630
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Dissolved	0.01130	0.01130	0.01050
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.420000	1.500000	1.410000
Selenium (Se)-Dissolved	0.00094	0.00090	0.00085
Silicon (Si)-Dissolved	3.45	3.17	3.11
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.350	9.790	9.970
Strontium (Sr)-Dissolved	0.32	0.312	0.325
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.00026	0.00030	0.00027
Vanadium (V)-Dissolved	0.0011	0.0012	0.0011
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUL-55 (Quesnel Lake 200m Beyond Hazeltine Creek (Centre))

Date Sampled	6-Jul-15	6-Jul-15	6-Jul-15	14-Jul-15	14-Jul-15	14-Jul-15	15-Jul-15	15-Jul-15	15-Jul-15	22-Jul-15	22-Jul-15	22-Jul-15
Depth	**0m**	**15m**	**30m**	**0m**	**15m**	**30m**	**0m**	**15m**	**30m**	**0m**	**15m**	**30m**
Physical Tests												
Conductivity (µS/cm)	105	109	112	102	104	111	101	106	111	105	109	112
Hardness (as CaCO3)	50.3	52.7	53.9	49.1	50.2	52.3	50.5	51.7	54.1	52.2	54.4	56.5
pH	7.95	7.95	7.95	7.87	7.88	7.88	7.91	7.91	7.90	7.88	7.89	7.90
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	69	64	67	60	61	68	69	70	72	61	64	62
Turbidity (ntu)	0.35	0.25	0.18	0.17	0.28	0.23	0.17	0.24	0.24	0.34	0.24	0.18
Anions and Nutrients												
Alkalinity, Total (as CaCO3)	49.3	50.8	52.4	48.3	47.0	50.4	45.2	47.9	49.0	46.6	47.6	50.0
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.032	0.033	0.034	0.034	0.034	0.036	0.033	0.035	0.036	0.032	0.032	0.033
Nitrate and Nitrite (as N)	0.076	0.122	0.138	0.064	0.085	0.134	0.063	0.104	0.143	0.059	0.113	0.139
Nitrate (as N)	0.076	0.122	0.138	0.064	0.085	0.134	0.063	0.104	0.143	0.059	0.113	0.139
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.151	0.177	0.195	0.125	0.152	0.192	0.160	0.175	0.205	0.132	0.172	0.183
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	<0.0020	0.002	<0.0020	<0.0020	<0.0020	0.0025	<0.0020	0.0035	<0.0020	<0.0020	<0.0020	0.0022
Sulfate (SO4)	5.98	6.03	6.26	5.97	6.04	6.38	6.28	6.12	6.47	6.04	5.96	6.18
Organic / Inorganic Carbon												
Dissolved Organic Carbon	2.08	1.81	1.92	2.05	2.12	2.01	1.58	1.57	1.49	2.04	1.97	1.98
Total Metals												
Aluminum (Al)-Total	0.0259	0.0135	0.0103	0.0147	0.0255	0.0176	0.0144	0.0160	0.0132	0.0281	0.0173	0.0123
Antimony (Sb)-Total	0.00016	0.00019	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00012	0.0001
Arsenic (As)-Total	0.00016	0.00015	0.00014	0.00011	0.00011	0.00012	0.00015	0.00014	0.00013	0.00015	0.00013	0.00013
Barium (Ba)-Total	0.00567	0.00523	0.00533	0.00525	0.00549	0.00556	0.00536	0.00542	0.00562	0.00619	0.00567	0.00582
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000051	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.0	17.8	17.2	16.6	17.0	17.8	16.5	17.4	18.5	17.1	17.7	18.2
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	<0.0015	<0.0010	<0.0010	0.00060	0.00099	0.00082	0.00058	0.00074	0.00077	<0.0015	0.00081	<0.0010
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	0.095	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000611	<0.000050	<0.000050	0.000227	0.000067	<0.000050	0.000067	0.000068	<0.000050	0.000067	0.000052
Lithium (Li)-Total	0.0012	0.0011	0.0012	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010
Magnesium (Mg)-Total	1.96	2.03	1.93	1.89	1.92	2.02	1.89	1.97	2.10	1.96	1.98	2.07
Manganese (Mn)-Total	0.00219	0.00110	<0.00080	0.00161	0.00202	0.00101	0.00159	0.00160	0.00069	0.00234	0.00119	0.00077
Mercury (Hg)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	0.000394	0.000367	0.000420	0.000350	0.000424	0.000404	0.000359	0.000351	0.000465	0.000404	0.000355	0.000404
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	0.00077	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.519	0.510	0.490	0.466	0.491	0.495	0.474	0.484	0.509	0.497	0.498	0.493
Selenium (Se)-Total	0.000109	0.000104	0.000100	0.000100	0.000121	0.000094	0.000097	0.000096	0.000072	0.000109	0.000096	0.000090
Silicon (Si)-Total	1.65	1.69	1.65	1.58	1.61	1.72	1.57	1.66	1.77	1.65	1.66	1.76
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.96	0.95	0.95	0.85	0.92	1.00	0.86	0.91	1.02	0.92	0.94	0.96
Strontium (Sr)-Total	0.125	0.132	0.129	0.124	0.129	0.141	0.122	0.132	0.142	0.122	0.129	0.133
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000155	0.000164	0.000162	0.000152	0.000158	0.000174	0.000146	0.000161	0.000174	0.000148	0.000152	0.000161
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals												
Aluminum (Al)-Dissolved	0.0130	0.0062	0.0056	0.0099	0.0085	0.0062	0.0092	0.0071	0.0059	0.0086	0.0061	0.0061
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00013	<0.00010	0.00011	0.00011	0.00011	<0.00010	0.00011	0.00010	0.00010	0.00011	<0.00010	<0.00010
Barium (Ba)-Dissolved	0.00566	0.00529	0.00541	0.00525	0.00529	0.00537	0.00543	0.00540	0.00544	0.00576	0.00560	0.00560
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	0.0000073	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.0	17.8	18.2	16.6	16.9	17.6	17.0	17.5	18.2	17.6	18.4	19.1
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00086	0.00119	0.00075	0.00051	0.00075	0.00079	<0.00050	0.00060	0.00079	0.00068	0.00081	0.00108
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000209	0.000104	<0.000050	0.000258	0.000151	<0.000050	<0.000050	<0.000050	<0.000050	0.000061	0.000064
Lithium (Li)-Dissolved	0.0011	0.001	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010
Magnesium (Mg)-Dissolved	1.93	2.02	2.06	1.89	1.91	2.01	1.95	1.99	2.08	1.99	2.07	2.14
Manganese (Mn)-Dissolved	0.00129	0.00018	0.00015	0.00039	0.00060	0.00020	0.00041	0.00065	0.00019	0.00050	0.00021	0.00017
Mercury (Hg)-Dissolved	0.00001	<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	0.000373	0.000354	0.000426	0.000317	0.000322	0.000371	0.000326	0.000339	0.000415	0.000410	0.000347	0.000403
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.499	0.506	0.514	0.477	0.480	0.486	0.488	0.483	0.504	0.504	0.493	0.492
Selenium (Se)-Dissolved	0.000125	0.000088	0.000108	0.000118	0.000088	0.000108	0.000097	0.000102	0.000097	0.000109	0.000098	0.000091
Silicon (Si)-Dissolved	1.61	1.69	1.73	1.56	1.58	1.69	1.62	1.62	1.74	1.60	1.69	1.78
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.90	0.93	0.97	0.86	0.90	0.97	0.88	0.92	1.01	0.92	0.92	0.95
Strontium (Sr)-Dissolved	0.122	0.132	0.134	0.120	0.126	0.136	0.119	0.130	0.136	0.120	0.128	0.134
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000149	0.000154	0.000162	0.000145	0.000146	0.000161	0.000138	0.000153	0.000163	0.000144	0.000149	0.000159

Note: Units are mg/L unless otherwise stated

Date Sampled	28-Jul-15	28-Jul-15	28-Jul-15	4-Aug-15	4-Aug-15	4-Aug-15	10-Aug-15	10-Aug-15	10-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15	25-Aug-15	26-Aug-15	26-Aug-15	31-Aug-15	31-Aug-15	31-Aug-15
Depth	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**
Physical Tests																		
Conductivity (µS/cm)	104	111	125	111	106	113	106	107	106	106	107	108	108	108	111	108	108	107
Hardness (as CaCO3)	53.0	54.3	62.0	54.1	53.0	55.5	53.0	53.4	53.3	51.3	51.9	52.5	52.9	53.3	52.9	53.4	53.4	54.1
pH (pH)	7.83	7.86	7.91	7.92	7.89	7.90	7.96	7.96	7.95	7.97	7.96	7.92	7.96	7.97	7.95	7.93	7.97	7.95
Total Suspended Solids	3.9	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	6.3	7.2
Total Dissolved Solids	66	69	76	71	73	72	64	68	66	69	70	67	71	76	73	59	60	59
Turbidity (ntu)	0.27	0.42	0.74	1.47	0.64	1.10	0.31	0.19	0.33	0.23	0.21	0.29	0.22	0.21	0.23	0.32	2.95	3.34
Anions and Nutrients																		
Alkalinity, Total (as CaCO3)	48.8	51.2	55.0	49.5	48.3	51.4	48.5	49.1	49.3	49.1	48.9	49.2	47.1	47.2	48.0	46.4	48.0	49.2
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.032	0.037	0.033	0.031	0.034	0.032	0.032	0.033	0.035	0.035	0.035	0.032	0.033	0.034	0.032	0.032	0.032
Nitrate and Nitrite (as N)	0.058	0.058	0.064	0.056	0.058	0.087	0.056	0.055	0.055	0.054	0.053	0.089	0.059	0.054	0.055	0.052	0.055	0.053
Nitrate (as N)	0.058	0.058	0.064	0.056	0.058	0.087	0.056	0.055	0.055	0.054	0.053	0.089	0.059	0.054	0.055	0.052	0.055	0.053
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.125	0.132	0.203	0.120	0.115	0.155	0.114	0.117	0.132	0.119	0.118	0.268	0.126	0.110	0.114	0.117	0.114	0.115
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	0.0013	0.0015	0.0012	0.0015	0.001	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	0.0028	0.0023	0.0022
Phosphorus (P)-Total	0.0033	0.0022	0.0056	0.0034	0.0028	0.0042	<0.0020	<0.0020	<0.0020	0.0021	0.0021	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.0159	0.0209
Sulfate (SO4)	6.07	6.88	9.31	6.77	6.34	7.03	6.07	6.09	6.12	6.21	6.22	6.26	6.51	6.54	6.96	6.38	6.53	6.47
Organic / Inorganic Carbon																		
Dissolved Organic Carbon	2.09	2.05	2.56	1.97	1.90	1.89	1.79	1.85	1.84	1.69	1.90	1.65	1.68	1.73	1.77	1.64	1.67	1.58
Total Metals																		
Aluminum (Al)-Total	0.0279	0.0323	0.0696	0.1040	0.0546	0.0867	0.0121	0.0185	0.0154	0.0130	0.0137	0.0190	0.0214	0.0132	0.0155	0.0158	0.1300	0.0858
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00015	0.00015	0.00026	0.00020	0.00015	0.00020	0.00013	0.00015	0.00013	0.00011	0.00012	0.00011	0.00014	0.00012	0.00015	0.00012	0.00016	0.00015
Barium (Ba)-Total	0.00584	0.00607	0.00851	0.00711	0.00607	0.00722	0.00513	0.00521	0.00518	0.00527	0.00527	0.00516	0.00542	0.00515	0.00570	0.00504	0.00687	0.00628
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	0.0000072	0.0000071	<0.0000050	<0.0000050	0.0000057	<0.0000050	<0.0000050	0.0000063	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.5	17.7	20.1	18.0	17.4	18.2	17.7	17.3	17.4	17.4	17.2	17.5	17.9	18.0	17.7	17.9	17.8	17.8
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00135	0.00148	0.00324	0.00314	0.00176	0.00312	0.00062	0.00102	0.00073	0.00062	0.00073	0.00075	0.00095	0.00059	0.00087	0.00067	0.00560	0.00357
Iron (Fe)-Total	<0.030	<0.030	0.083	0.093	0.052	0.091	<0.030	<0.030	0.036	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.1	0.066
Lead (Pb)-Total	<0.000050	0.004340	0.000107	<0.000050	0.000311	0.000121	<0.000050	0.000441	0.000087	<0.000050	0.000071	0.000187	<0.000050	0.000228	0.000111	<0.000050	0.000219	0.000079
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	2.01	2.10	2.56	2.11	1.97	2.11	1.92	1.90	1.93	1.91	1.90	1.91	1.94	1.97	1.96	1.98	2.04	2.00
Manganese (Mn)-Total	0.00341	0.00557	0.01190	0.00570	0.00296	0.00631	0.00102	0.00130	0.00135	0.00087	0.00115	0.00166	0.00135	0.00115	0.00374	0.00124	0.00427	0.00303
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Total	0.000418	0.000572	0.001310	0.000536	0.000412	0.000593	0.000355	0.000340	0.000336	0.000337	0.000350	0.000379	0.000354	0.000319	0.000424	0.000320	0.000371	0.000358
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.508	0.506	0.609	0.541	0.522	0.553	0.479	0.485	0.475	0.434	0.444	0.435	0.503	0.480	0.515	0.486	0.519	0.502
Selenium (Se)-Total	0.000107	0.000101	0.000168	0.000132	0.000121	0.000112	0.000098	0.000093	0.000119	0.000084	0.000103	0.000102	0.000103	0.000086	0.000090	0.000083	0.000108	0.000105
Silicon (Si)-Total	1.64	1.65	1.89	1.81	1.65	1.82	1.56	1.54	1.55	1.52	1.52	1.57	1.53	1.51	1.47	1.54	1.76	1.65
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.90	1.04	1.71	1.11	0.98	1.15	0.85	0.86	0.86	0.89	0.90	0.91	0.94	0.89	1.04	0.90	0.91	0.90
Strontium (Sr)-Total	0.119	0.121	0.143	0.129	0.125	0.136	0.122	0.121	0.122	0.123	0.122	0.125	0.132	0.131	0.133	0.135	0.135	0.135
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000156	0.000158	0.000200	0.000162	0.000157	0.000170	0.000149	0.000152	0.000150	0.000159	0.000160	0.000162	0.000166	0.000162	0.000170	0.000159	0.000166	0.000164
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals																		
Aluminum (Al)-Dissolved	0.0083	0.0085	0.0082	0.0086	0.0079	0.0091	0.0078	0.0078	0.0085	0.0109	0.0077	0.0068	0.0095	0.0081	0.0076	0.0068	0.0088	0.0098
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00011	0.00014	0.00020	0.00013	0.00013	0.00014	<0.00010	0.00011	0.00011	0.00011	0.00011	<0.00010	0.00011	0.00010	0.00012	0.00010	<0.00010	0.00010
Barium (Ba)-Dissolved	0.00566	0.00590	0.00785	0.00622	0.00556	0.00626	0.00505	0.00512	0.00521	0.00513	0.00512	0.00500	0.00517	0.00526	0.00545	0.00482	0.00513	0.00501
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	0.0000073	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000076	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.9	18.2	20.6	18.3	17.9	18.7	18.0	18.2	18.1	17.4	17.6	17.9	18.0	18.2	17.9	18.1	18.1	18.4
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00081	0.00089	0.00146	0.00108	0.00097	0.00171	0.00052	0.00096	0.00136	0.00070	0.00055	0.00058	0.00055	0.00064	0.00066	<0.00050	0.00113	0.00089
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000140	0.000110	<0.000050	0.000149	0.000117	<0.000050	0.000212	0.000149	0.000053	0.000061	0.000062	<0.000050	0.000174	0.000096	<0.000050	0.000121	0.000072
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	2.02	2.13	2.58	2.06	1.98	2.11	1.94	1.95	1.94	1.89	1.93	1.91	1.93	1.94	1.98	1.99	1.99	1.99
Manganese (Mn)-Dissolved	0.00127	0.00353	0.00780	0.00221	0.00073	0.00320	0.00031	0.00029	0.00056	0.00045	0.00025	0.00048	0.00033	0.00042	0.00274	0.00038	0.00074	0.00042
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000391	0.000572	0.001330	0.000485	0.000412	0.000552	0.000331	0.000348	0.000358	0.000315	0.000325	0.000307	0.000308	0.000299	0.000393	0.000311	0.000362	0.000341
Nickel (Ni)-Dissolved	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.488	0.516	0.583	0.517	0.520	0.527	0.487	0.486	0.492	0.436	0.435	0.434	0.486	0.480	0.490	0.471	0.486	0.468
Selenium (Se)-Dissolved	0.000128	0.000109	0.000190	0.000115	0.000128	0.000107	0.000084	0.000122	0.000110	0.000103	0.000079	0.000085	0.000096	0.000092	0.000080	0.000087	0.000099	0.000110
Silicon (Si)-Dissolved	1.59	1.60	1.75	1.59	1.57	1.67	1.54	1.55	1.55	1.49	1.51	1.54	1.49	1.47	1.45	1.50	1.49	1.50
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.89	1.09	1.76	1.08	0.96	1.16	0.86	0.86	0.86	0.88	0.86	0.88	0.91	0.89	1.02	0.86	0.90	0.88
Strontium (Sr)-Dissolved	0.118	0.121	0.142	0.124	0.123	0.132	0.121	0.121	0.120	0.120	0.119	0.123	0.129	0.130	0.131	0.130	0.133	0.134
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000150	0.000155	0.000188	0.000150	0.000144	0.000159	0.000149	0.000148	0.000145	0.000148	0.000144	0.000152	0.000158	0.000159	0.000160	0.000147	0.000156	0.000152
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Date Sampled	3-Sep-15	3-Sep-15	3-Sep-15	8-Sep-15	8-Sep-15	8-Sep-15	14-Sep-15	14-Sep-15	14-Sep-15	22-Sep-15	22-Sep-15	22-Sep-15	28-Sep-15	28-Sep-15	28-Sep-15
Depth	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**	**0m**	**5m**	**11m**
Physical Tests															
Conductivity (µS/cm)	106	105	106	107	108	112	109	110	110	109	108	110	108	107	108
Hardness (as CaCO3)	53.9	52.9	53.2	51.9	50.3	53.9	54.0	53.8	55.6	53.7	53.4	53.1	53.0	52.7	52.9
pH (pH)	7.89	7.88	7.90	7.97	7.94	7.94	7.87	7.88	7.81	7.95	7.94	7.96	7.90	7.89	7.94
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	74	67	69	71	72	71	70	66	66	73	73	71	64	65	63
Turbidity (ntu)	0.22	0.40	0.35	0.23	0.41	0.47	0.32	0.30	0.26	0.23	0.34	0.27	0.33	0.44	0.33
Anions and Nutrients															
Alkalinity, Total (as CaCO3)	49.3	48.8	48.1	49.2	49.0	51.2	50.0	49.8	50.8	50.2	49.8	50.9	50.3	49.6	49.2
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.032	0.032	0.032	0.032	0.032	0.033	0.033	0.031	0.032	0.032	0.032	0.032	0.031	0.033	0.033
Nitrate and Nitrite (as N)	0.050	0.051	0.051	0.052	0.049	0.052	0.051	0.056	0.131	0.055	0.054	0.054	0.055	0.054	0.053
Nitrate (as N)	0.050	0.051	0.051	0.051	0.049	0.049	0.051	0.056	0.131	0.055	0.054	0.054	0.055	0.054	0.053
Nitrite (as N)	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.122	0.121	0.117	0.124	0.124	0.128	0.125	0.120	0.184	0.104	0.134	0.113	0.115	0.116	0.125
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	0.0015	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024	0.002	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	0.0035	0.0056	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0044	0.0054	<0.0020	0.0024	0.0031
Sulfate (SO4)	6.37	6.36	6.37	6.31	6.32	6.84	6.62	6.59	6.43	6.26	6.30	6.30	6.56	6.56	6.58
Organic / Inorganic Carbon															
Dissolved Organic Carbon	1.68	1.70	1.74	2.06	1.91	1.91	1.87	1.80	1.95	1.77	1.77	1.80	1.72	1.66	1.75
Total Metals															
Aluminum (Al)-Total	0.0196	0.1270	0.0208	0.0158	0.0229	0.0253	0.0245	0.0219	0.0174	0.0121	0.0205	0.0149	0.0137	0.0392	0.0178
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00011	0.00018	0.00013	0.00013	0.00013	0.00012	0.00019	0.00015	0.00016	0.00012	0.00012	0.00011	0.00014	0.00011	0.00012
Barium (Ba)-Total	0.00506	0.00722	0.00504	0.00524	0.00543	0.00589	0.00546	0.00531	0.00560	0.00496	0.00513	0.00494	0.00518	0.00568	0.00524
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000192	<0.0000050
Calcium (Ca)-Total	18.1	18.2	18.0	18.1	18.3	18.7	18.1	17.9	18.2	17.7	18.1	17.8	18.0	18.2	17.9
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00018	<0.00010
Copper (Cu)-Total	0.00081	0.00412	0.00083	0.00079	0.00091	0.00111	0.00082	0.00086	0.00091	0.00062	0.00101	0.00103	0.00084	0.02790	0.00106
Iron (Fe)-Total	<0.030	0.094	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.191	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000180	0.000056	<0.000050	0.000061	0.000065	<0.000050	<0.000050	<0.000050	<0.000050	0.000218	0.000073	<0.000050	0.000435	0.000080
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.0015	0.0015	0.0014
Magnesium (Mg)-Total	2.01	2.06	2.00	1.95	1.97	2.11	2.00	2.00	2.07	2.01	2.04	2.01	2.05	2.05	2.01
Manganese (Mn)-Total	0.00108	0.00388	0.00108	0.00112	0.00151	0.00497	0.00239	0.00166	0.00102	0.00118	0.00140	0.00146	0.00151	0.00200	0.00164
Mercury (Hg) - Total	-	-	-	-	-	-	-	-	-	-	-	-			
Molybdenum (Mo)-Total	0.000317	0.000316	0.000311	0.000317	0.000315	0.000437	0.000366	0.000355	0.000424	0.000393	0.000339	0.000379	0.000354	0.000381	0.000334
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00128	<0.00050
Potassium (K)-Total	0.478	0.495	0.463	0.490	0.466	0.492	0.511	0.502	0.531	0.455	0.472	0.469	0.479	0.492	0.475
Selenium (Se)-Total	0.000116	0.000105	0.000093	0.000110	0.000077	0.000107	0.000112	0.000120	0.000072	0.000091	0.000111	0.000108	0.000094	0.000076	0.000080
Silicon (Si)-Total	1.52	1.74	1.52	1.51	1.54	1.58	1.50	1.50	1.72	1.46	1.52	1.48	1.51	1.49	1.45
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.88	0.86	0.85	0.97	0.95	1.09	0.94	0.89	1.01	0.90	0.95	0.93	0.88	0.91	0.88
Strontium (Sr)-Total	0.129	0.129	0.126	0.136	0.134	0.141	0.137	0.135	0.136	0.137	0.138	0.136	0.145	0.145	0.141
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000019	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00059	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000154	0.000155	0.000151	0.000164	0.000168	0.000185	0.000156	0.000151	0.000155	0.000160	0.000161	0.000159	0.000169	0.000163	0.000163
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0212	<0.0030
Dissolved Metals															
Aluminum (Al)-Dissolved	0.0073	0.0074	0.0072	0.0076	0.0079	0.0067	0.0083	0.0076	0.0055	0.0116	0.0085	0.0087	0.0064	0.0073	0.0058
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00011	<0.00010	0.00010	0.00010	0.00011	0.00012	0.00012	0.00012	0.00011	0.00014	0.00016	0.00010	0.00012	0.00011	0.00012
Barium (Ba)-Dissolved	0.00507	0.00479	0.00507	0.00488	0.00511	0.00544	0.00527	0.00521	0.00542	0.00505	0.00494	0.00493	0.00505	0.00510	0.00505
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000055	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	18.2	17.9	18.0	17.6	17.1	18.3	18.3	18.2	18.8	18.2	18.1	18.0	18.0	17.9	17.9
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	<0.00050	0.00076	0.00072	0.00055	0.00066	0.00073	0.00064	0.00073	0.00080	0.00073	0.00084	0.00078	0.00057	0.00081	0.00077
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000093	0.000073	<0.000050	0.000113	0.000139	<0.000050	<0.000050	<0.000050	0.000059	0.000174	0.000078	<0.000050	0.000072	0.000059
Lithium (Li)-Dissolved	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	0.0012	0.0013
Magnesium (Mg)-Dissolved	2.03	1.97	1.99	1.89	1.83	2.01	2.03	2.01	2.11	2.01	2.01	2.01	1.96	1.96	1.99
Manganese (Mn)-Dissolved	0.00030	0.00038	0.00030	0.00053	0.00061	0.00371	0.00139	0.00073	0.00022	0.00056	0.00056	0.00052	0.00052	0.00041	0.00035
Mercury (Hg) - Dissolved	-	-	-	-	-	-	-	-	-	-	-	-			
Molybdenum (Mo)-Dissolved	0.00030	0.00029	0.00032	0.00030	0.00034	0.00044	0.00035	0.00034	0.00042	0.00032	0.00036	0.00033	0.00030	0.00031	0.00030
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.494	0.459	0.496	0.473	0.463	0.457	0.502	0.504	0.520	0.470	0.465	0.460	0.466	0.463	0.478
Selenium (Se)-Dissolved	0.000079	0.000093	0.000076	0.000096	0.000094	0.000089	0.000090	0.000074	0.000074	0.000112	0.000157	0.000083	0.000096	0.000092	0.000072
Silicon (Si)-Dissolved	1.51	1.47	1.49	1.45	1.41	1.49	1.46	1.46	1.73	1.47	1.47	1.48	1.42	1.42	1.43
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.86	0.85	0.85	0.93	0.91	1.02	0.92	0.90	0.98	0.95	0.93	0.93	0.85	0.85	0.85
Strontium (Sr)-Dissolved	0.128	0.126	0.127	0.132	0.130	0.135	0.135	0.133	0.135	0.130	0.134	0.129	0.136	0.136	0.137
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	0.000016	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000150	0.000144	0.000155	0.000154	0.000170	0.000179	0.000153	0.000152	0.000149	0.000144	0.000152	0.000147	0.000150	0.000149	0.000153
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0047	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1

QUL-56a (Quesnel Lake Beyond Hazeltine Creek (Left))

Date Sampled	28-Jul-15	28-Jul-15	28-Jul-15
Depth	**0m**	**5m**	**10m**
Physical Tests			
Conductivity (µS/cm)	106	120	132
Hardness (as CaCO3)	52.6	58.7	62.0
pH (pH)	7.86	7.91	7.92
Total Suspended Solids	<3.0	5.5	<3.0
Total Dissolved Solids	65	75	79
Turbidity (ntu)	0.27	2.31	1.55
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	48.4	53.4	56.9
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.035	0.038
Nitrate and Nitrite (as N)	0.059	0.057	0.059
Nitrate (as N)	0.059	0.057	0.059
Nitrite (as N)	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.120	0.138	0.158
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	0.0051	0.0079	0.0081
Sulfate (SO4)	6.09	8.44	10.50
Organic / Inorganic Carbon			
Dissolved Organic Carbon	1.92	2.26	2.60
Total Metals			
Aluminum (Al)-Total	0.0251	0.1940	0.1270
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00015	0.00029	0.00034
Barium (Ba)-Total	0.00579	0.00933	0.01070
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.7	19.3	21.8
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	0.00014	0.00011
Copper (Cu)-Total	0.00128	0.00454	0.00540
Iron (Fe)-Total	<0.030	0.23	0.17
Lead (Pb)-Total	<0.000050	0.000151	0.000142
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	2.01	2.41	2.93
Manganese (Mn)-Total	0.00281	0.01210	0.02130
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	0.000430	0.001050	0.001830
Nickel (Ni)-Total	<0.00050	0.00059	0.00052
Potassium (K)-Total	0.499	0.607	0.656
Selenium (Se)-Total	0.000100	0.000168	0.000223
Silicon (Si)-Total	1.63	2.02	2.10
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.92	1.48	2.14
Strontium (Sr)-Total	0.120	0.135	0.153
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000155	0.000190	0.000221
Vanadium (V)-Total	<0.00050	0.00078	0.00061
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030
Dissolved Metals			
Aluminum (Al)-Dissolved	0.0084	0.0092	0.0081
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00013	0.00018	0.00021
Barium (Ba)-Dissolved	0.00546	0.00692	0.00739
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.8	19.6	20.6
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00073	0.00144	0.00137
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000065	0.000084
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.99	2.37	2.57
Manganese (Mn)-Dissolved	0.00121	0.00401	0.00788
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	0.000372	0.000950	0.001170
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.483	0.551	0.565
Selenium (Se)-Dissolved	0.000104	0.000147	0.000172
Silicon (Si)-Dissolved	1.57	1.68	1.76
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.88	1.43	1.63
Strontium (Sr)-Dissolved	0.116	0.133	0.138
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000143	0.000172	0.000181
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1

QUL-18 (Quesnel Lake Deep Site in Middle of West Arm)

Date Sampled	1-Jul-15	1-Jul-15	1-Jul-15	10-Aug-15	10-Aug-15	10-Aug-15	2-Sep-15	2-Sep-15	2-Sep-15
Depth	**0m**	**40m**	**80m**	**0m**	**40m**	**80m**	**0m**	**40m**	**80m**
Physical Tests									
Conductivity (µS/cm)	103	112	115	107	112	114	106	111	112
Hardness (as CaCO3)	48.7	53.0	54.1	53.0	55.8	56.8	53.2	55.2	55.9
pH (pH)	8.00	7.93	7.94	7.95	7.93	7.93	7.91	7.84	7.87
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	62	63	66	69	72	76	65	68	69
Turbidity (ntu)	0.25	0.21	0.23	0.19	0.20	0.17	0.24	0.85	0.36
Anions and Nutrients									
Alkalinity, Total (as CaCO3)	46.3	50.6	51.5	48.9	51.1	52.4	46.9	49.7	49.6
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.034	0.034	0.033	0.035	0.036	0.030	0.032	0.033
Nitrate and Nitrite (as N)	0.073	0.140	0.141	0.059	0.143	0.146	0.051	0.147	0.148
Nitrate (as N)	0.073	0.140	0.141	0.059	0.143	0.146	0.051	0.147	0.148
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.129	0.171	0.181	0.117	0.193	0.187	0.117	0.195	0.198
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	0.0025	0.0027
Phosphorus (P)-Total	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	0.0054
Sulfate (SO4)	5.93	6.47	6.88	6.08	6.36	6.75	6.17	6.28	6.51
Organic / Inorganic Carbon									
Dissolved Organic Carbon	2.08	2.09	2.04	1.76	1.86	2.00	1.88	1.92	1.88
Total Metals									
Aluminum (Al)-Total	0.0145	0.0124	0.0207	0.0123	0.0134	0.0190	0.0111	0.0834	0.0676
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00011	0.00012	0.00013	0.00015	0.00014	0.00016	0.00011	0.00015	0.00017
Barium (Ba)-Total	0.00478	0.00526	0.00593	0.00504	0.00541	0.00595	0.00486	0.00668	0.00716
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000056	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	15.8	17.6	18.4	17.1	18.3	18.9	17.9	18.8	18.9
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00063	0.00084	0.00130	0.00061	0.00110	0.00161	0.00054	0.00313	0.00265
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.063	0.042
Lead (Pb)-Total	<0.000050	<0.00010	<0.00015	<0.000050	0.000105	0.000123	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	0.001	0.0011	0.0011	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	1.80	1.99	2.10	1.86	2.01	2.11	1.99	2.16	2.17
Manganese (Mn)-Total	0.00140	0.00096	0.00102	0.00104	0.00088	0.00142	0.00082	0.00271	0.00241
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-	-
Molybdenum (Mo)-Total	0.000378	0.000420	0.000651	0.000333	0.000439	0.000684	0.000311	0.000450	0.000637
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.423	0.467	0.508	0.476	0.513	0.536	0.479	0.544	0.603
Selenium (Se)-Total	0.000104	0.000096	0.000114	0.000096	0.000100	0.000102	0.000071	0.000094	0.000095
Silicon (Si)-Total	1.53	1.68	1.78	1.51	1.75	1.85	1.48	1.96	1.92
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.80	0.96	1.12	0.83	0.97	1.11	0.88	1.04	1.22
Strontium (Sr)-Total	0.109	0.131	0.132	0.120	0.131	0.134	0.133	0.139	0.143
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000140	0.000174	0.000188	0.000148	0.000168	0.000183	0.000158	0.000171	0.000193
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals									
Aluminum (Al)-Dissolved	0.0101	0.0059	0.0058	0.0083	0.0060	0.0067	0.0066	0.0069	0.0064
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00010	0.00010	0.00012	0.00011	0.00011	0.00013	<0.00010	0.00011	0.00012
Barium (Ba)-Dissolved	0.00509	0.00518	0.00579	0.00504	0.00529	0.00564	0.00495	0.00545	0.00559
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	16.4	17.9	18.2	18.0	18.9	19.3	18.1	18.6	18.9
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00055	0.00083	0.00116	0.00052	0.00117	0.00150	<0.00050	0.00097	0.00129
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000143	0.000117	<0.000050	0.000146	0.000252	<0.000050	<0.000050	0.000053
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.87	2.01	2.07	1.94	2.06	2.13	1.98	2.10	2.14
Manganese (Mn)-Dissolved	0.00051	0.00013	0.00018	0.00034	0.00021	0.00044	0.00023	0.00030	0.00035
Mercury (Hg) - Dissolved	-	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000319	0.000367	0.000591	0.000331	0.000424	0.000680	0.000283	0.000415	0.000573
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.465	0.467	0.500	0.489	0.518	0.544	0.476	0.518	0.528
Selenium (Se)-Dissolved	0.000106	0.000086	0.000106	0.000083	0.000090	0.000114	0.000068	0.000110	0.000096
Silicon (Si)-Dissolved	1.56	1.70	1.74	1.53	1.76	1.82	1.47	1.76	1.78
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.88	0.96	1.09	0.86	0.99	1.11	0.86	1.02	1.09
Strontium (Sr)-Dissolved	0.114	0.127	0.131	0.121	0.131	0.134	0.130	0.135	0.136
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000147	0.000152	0.000169	0.000146	0.000163	0.000182	0.000154	0.000161	0.000173
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1

QUL-2a (Quesnel Lake Between Cariboo Island and Hazeltine Creek)

Date Sampled	1-Jul-15	1-Jul-15	1-Jul-15	26-Aug-15	26-Aug-15	26-Aug-15	14-Sep-15	14-Sep-15	14-Sep-15
Depth	**0m**	**40m**	**60m**	**0m**	**40m**	**60m**	**0m**	**40m**	**60m**
Physical Tests									
Conductivity (µS/cm)	102	111	113	107	111	113	109	111	110
Hardness (as CaCO3)	48.8	53.1	53.5	53.1	53.0	55.6	53.4	54.3	54.7
pH (pH)	8.00	7.94	7.94	7.98	7.80	7.80	7.90	7.83	7.82
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	58	62	65	77	74	73	71	69	68
Turbidity (ntu)	0.23	0.19	0.26	0.16	0.22	0.24	0.23	0.25	0.19
Anions and Nutrients									
Alkalinity, Total (as CaCO3)	46.8	50.9	51.2	46.6	48.5	49.2	49.7	50.8	50.4
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.033	0.034	0.031	0.033	0.035	0.032	0.033	0.032
Nitrate and Nitrite (as N)	0.072	0.138	0.141	0.050	0.145	0.149	0.052	0.135	0.137
Nitrate (as N)	0.072	0.138	0.141	0.050	0.145	0.149	0.052	0.135	0.137
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.123	0.168	0.171	0.104	0.182	0.191	0.124	0.191	0.186
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Sulfate (SO4)	5.92	6.40	6.62	6.54	6.56	6.76	6.46	6.43	6.43
Organic / Inorganic Carbon									
Dissolved Organic Carbon	1.97	1.75	1.87	1.58	1.70	1.74	1.72	1.73	1.76
Total Metals									
Aluminum (Al)-Total	0.0149	0.0124	0.0152	0.0100	0.0144	0.0191	0.0119	0.0207	0.0127
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00012	0.00011	0.00014	0.00011	0.00013	0.00014	0.00015	0.00014	0.00014
Barium (Ba)-Total	0.00508	0.00529	0.00553	0.00509	0.00563	0.00594	0.00507	0.00541	0.00512
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	16.5	17.8	17.9	17.5	17.7	18.7	17.9	18.5	18.2
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00055	0.00089	0.00109	<0.00050	0.00080	0.00111	0.00061	0.00111	0.00072
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	<0.00015	<0.00010	<0.000050	0.000059	0.000057	<0.000050	0.000175	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.0011	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	1.88	2.01	2.04	1.86	1.93	2.08	1.98	2.08	2.04
Manganese (Mn)-Total	0.00140	0.00126	0.00115	0.00057	0.00118	0.00159	0.00089	0.00130	0.00108
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-	-
Molybdenum (Mo)-Total	0.000316	0.000381	0.000501	0.000305	0.000451	0.000564	0.000307	0.000354	0.000359
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.452	0.478	0.497	0.487	0.520	0.537	0.510	0.516	0.513
Selenium (Se)-Total	0.000117	0.000095	0.000128	0.000091	0.000130	0.000131	0.000076	0.000086	0.000084
Silicon (Si)-Total	1.58	1.70	1.74	1.43	1.68	1.81	1.46	1.72	1.68
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.85	0.96	1.04	0.88	1.03	1.11	0.92	0.98	0.98
Strontium (Sr)-Total	0.112	0.132	0.131	0.134	0.145	0.135	0.136	0.138	0.137
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000148	0.000168	0.000179	0.000168	0.000173	0.000190	0.000153	0.000158	0.000159
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals									
Aluminum (Al)-Dissolved	0.0100	0.0103	0.0070	0.0072	0.0053	0.0061	0.0070	0.0057	0.0057
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	<0.00010	<0.00010	0.00012	<0.00010	0.00010	0.00011	<0.00010	0.00011	0.00010
Barium (Ba)-Dissolved	0.00498	0.00531	0.00545	0.00494	0.00535	0.00574	0.00500	0.00505	0.00527
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	16.5	17.9	18.0	18.1	18.0	18.8	18.1	18.4	18.5
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00054	0.00098	0.00099	<0.00050	0.00072	0.00101	<0.00050	0.00074	0.00069
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000121	0.000098	<0.000050	0.000058	0.000069	<0.000050	0.000118	0.000057
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.88	2.02	2.05	1.93	1.96	2.07	1.98	2.04	2.05
Manganese (Mn)-Dissolved	0.00055	0.00058	0.00020	0.00017	0.00024	0.00054	0.00023	0.00029	0.00025
Mercury (Hg) - Dissolved	-	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000295	0.000355	0.000483	0.000300	0.000381	0.000522	0.000316	0.000354	0.000344
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.444	0.467	0.483	0.475	0.503	0.534	0.485	0.514	0.519
Selenium (Se)-Dissolved	0.000091	0.000080	0.000103	0.000116	0.000100	0.000110	0.000066	0.000082	0.000081
Silicon (Si)-Dissolved	1.57	1.70	1.72	1.44	1.65	1.75	1.46	1.66	1.69
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.83	0.94	1.01	0.87	1.00	1.11	0.87	0.95	0.98
Strontium (Sr)-Dissolved	0.117	0.129	0.132	0.131	0.135	0.135	0.133	0.136	0.137
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000136	0.000155	0.000161	0.000154	0.000160	0.000181	0.000152	0.000157	0.000155
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUL-40a (Quesnel Lake Horsefly Bay)

Date Sampled	15-Jul-15	15-Jul-15	15-Jul-15	15-Jul-15	15-Jul-15	17-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15
Depth	**0m**	**40m**	**80m**	**120m**	**140m**	**0m**	**40m**	**80m**	**120m**	**140m**
Physical Tests										
Conductivity (µS/cm)	102	111	111	111	111	108	110	111	111	112
Hardness (as CaCO3)	50	54.2	54	54.2	54.2	51.3	52.8	53.8	53.3	53.9
pH (pH)	7.91	7.67	7.87	7.90	7.89	7.97	7.82	7.81	7.82	7.81
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	69	73	70	75	75	68	74	70	70	69
Turbidity (ntu)	0.21	0.17	0.18	0.11	0.14	0.36	0.24	0.20	0.21	0.17
Anions and Nutrients										
Alkalinity, Total (as CaCO3)	45.9	48.7	48.7	49.4	49.1	49.2	50.9	51.4	50.8	50.8
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.033	0.036	0.036	0.035	0.036	0.035	0.036	0.036	0.036	0.036
Nitrate and Nitrite (as N)	0.0627	0.14	0.143	0.144	0.146	0.0437	0.141	0.144	0.145	0.147
Nitrate (as N)	0.063	0.140	0.143	0.144	0.146	0.044	0.141	0.144	0.145	0.147
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.135	0.190	0.191	0.206	0.199	0.106	0.185	0.260	0.208	0.209
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020
Phosphorus (P)-Total	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
Sulfate (SO4)	5.98	6.37	6.36	6.33	6.33	6.26	6.32	6.32	6.30	6.31
Organic / Inorganic Carbon										
Dissolved Organic Carbon	1.63	1.52	1.42	1.71	1.46	2.06	1.93	1.67	1.70	1.66
Total Metals										
Aluminum (Al)-Total	0.0143	0.0129	0.0126	0.0118	0.0131	0.0140	0.0126	0.0146	0.0119	0.0115
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00014	0.00013	0.00012	0.00013	0.00010	0.00013	0.00011	0.00011	0.00010	<0.00010
Barium (Ba)-Total	0.00537	0.00547	0.00527	0.00529	0.00524	0.00563	0.00531	0.00530	0.00518	0.00513
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	16.8	18.4	17.8	18.1	18.0	17.0	17.9	17.9	17.8	18.0
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00052	0.00081	0.00072	0.00072	0.00074	0.00062	0.00074	0.00077	0.00067	0.00064
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000185	0.000053	0.000063	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	1.95	2.11	2.05	2.08	2.08	1.94	1.96	1.96	1.95	1.97
Manganese (Mn)-Total	0.00175	0.00157	0.00122	0.00107	0.00127	0.00177	0.00095	0.00108	0.00103	0.00087
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Total	0.000344	0.000394	0.000368	0.000348	0.000335	0.000365	0.000363	0.000417	0.000332	0.000329
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.479	0.502	0.486	0.491	0.482	0.456	0.451	0.454	0.443	0.437
Selenium (Se)-Total	0.000106	0.000093	0.000075	0.000083	0.000073	0.000117	0.000099	0.000096	0.000098	0.000098
Silicon (Si)-Total	1.61	1.78	1.72	1.75	1.76	1.55	1.70	1.72	1.72	1.72
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.858	0.983	0.943	0.959	0.943	0.924	0.955	1.010	0.946	0.932
Strontium (Sr)-Total	0.121	0.140	0.136	0.138	0.137	0.119	0.130	0.130	0.132	0.133
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000147	0.000169	0.000164	0.000163	0.000158	0.000150	0.000167	0.000164	0.000161	0.000164
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals										
Aluminum (Al)-Dissolved	0.0100	0.0058	0.0062	0.0056	0.0056	0.0087	0.0057	0.0053	0.0061	0.0089
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00013	<0.00010	<0.00010	0.00011	<0.00010	0.00012	0.00010	<0.00010	<0.00010	<0.00010
Barium (Ba)-Dissolved	0.00533	0.00532	0.00519	0.00525	0.00534	0.00532	0.00521	0.00511	0.00502	0.00526
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	16.9	18.2	18.2	18.3	18.2	17.4	18.0	18.3	18.1	18.3
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	<0.00050	0.00079	0.00076	0.00087	0.00080	0.00055	0.00068	0.00062	0.00063	0.00075
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000267	0.000095	0.000247	0.000081	<0.000050	<0.000050	<0.000050	0.000092	0.000091
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.93	2.09	2.08	2.09	2.09	1.90	1.94	1.99	1.97	1.98
Manganese (Mn)-Dissolved	0.00033	0.00052	0.00041	0.00027	0.00038	0.00025	0.00019	0.00019	0.00023	0.00039
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000300	0.000349	0.000344	0.000318	0.000345	0.000331	0.000345	0.000330	0.000306	0.000336
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.477	0.493	0.504	0.491	0.494	0.440	0.447	0.439	0.451	0.452
Selenium (Se)-Dissolved	0.000090	0.000073	0.000098	0.000099	0.000097	0.000113	0.000090	0.000096	0.000085	0.000090
Silicon (Si)-Dissolved	1.55	1.75	1.73	1.76	1.77	1.51	1.65	1.69	1.68	1.71
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.843	0.974	0.969	0.954	0.950	0.866	0.934	0.933	0.935	0.953
Strontium (Sr)-Dissolved	0.119	0.134	0.133	0.134	0.137	0.119	0.131	0.127	0.128	0.129
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000137	0.000158	0.000163	0.000155	0.000156	0.000151	0.000161	0.000157	0.000156	0.000158
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUL-40a (Quesnel Lake Horsefly Bay)

Date Sampled	17-Sep-15	17-Sep-15	17-Sep-15	17-Sep-15	17-Sep-15
Depth	**0m**	**40m**	**80m**	**120m**	**140m**
Physical Tests					
Conductivity (µS/cm)	106	110	110	109	109
Hardness (as CaCO3)	50.7	51.6	52.3	51.7	52.6
pH (pH)	7.95	7.83	7.84	7.83	7.85
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	65	67	70	65	68
Turbidity (ntu)	0.25	0.34	0.41	0.22	0.16
Anions and Nutrients					
Alkalinity, Total (as CaCO3)	49.5	50.3	50.8	49.9	50.4
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.033	0.034	0.034	0.034	0.034
Nitrate and Nitrite (as N)	0.0531	0.132	0.144	0.146	0.146
Nitrate (as N)	0.053	0.132	0.144	0.146	0.146
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.113	0.176	0.179	0.184	0.181
Orthophosphate-Dissolved (as P)	<0.0010	0.0212	0.0137	0.0043	0.0015
Phosphorus (P)-Total Dissolved	<0.0020	0.0396	0.0659	0.022	0.004
Phosphorus (P)-Total	<0.0020	0.0975	0.0318	0.0292	0.0028
Sulfate (SO4)	6.55	6.47	6.48	6.43	6.42
Organic / Inorganic Carbon					
Dissolved Organic Carbon	1.67	2.26	2.00	1.62	1.64
Total Metals					
Aluminum (Al)-Total	0.0102	0.0382	0.0196	0.0145	0.0110
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00013	0.00013	<0.00010	0.00013	0.00011
Barium (Ba)-Total	0.00492	0.00564	0.00527	0.00518	0.00506
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	0.000054	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.0	17.5	17.4	17.5	17.5
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00051	0.00128	0.00093	0.00124	0.00058
Iron (Fe)-Total	<0.030	0.031	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000092	<0.000050	0.000073	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	1.87	1.97	1.96	1.96	1.95
Manganese (Mn)-Total	0.00073	0.00147	0.00102	0.00085	0.00055
Mercury (Hg) - Total	-	-	-	-	-
Molybdenum (Mo)-Total	0.000297	0.000354	0.000321	0.000379	0.000316
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.441	0.486	0.478	0.477	0.470
Selenium (Se)-Total	0.000093	0.000115	0.000067	0.000091	0.000097
Silicon (Si)-Total	1.37	1.66	1.63	1.62	1.61
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.873	1.470	1.090	1.030	0.961
Strontium (Sr)-Total	0.130	0.135	0.136	0.133	0.131
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000155	0.000160	0.000156	0.000155	0.000154
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals					
Aluminum (Al)-Dissolved	0.0069	0.0068	0.0054	0.0056	0.0049
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	<0.00010	0.00011	<0.00010	<0.00010	0.00010
Barium (Ba)-Dissolved	0.00471	0.00521	0.00510	0.00500	0.00498
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.2	17.5	17.7	17.5	17.8
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00052	0.00094	0.00084	0.00099	0.00055
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000116	0.000062	<0.000050	<0.000050
Lithium (Li)-Dissolved	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.88	1.94	1.98	1.94	1.97
Manganese (Mn)-Dissolved	0.00015	0.00025	0.00020	<0.00010	<0.00010
Mercury (Hg) - Dissolved	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000280	0.000349	0.000309	0.000317	0.000301
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.447	0.475	0.476	0.472	0.463
Selenium (Se)-Dissolved	0.000086	0.000090	0.000085	0.000071	0.000108
Silicon (Si)-Dissolved	1.36	1.58	1.63	1.59	1.62
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.868	1.150	1.100	0.991	0.942
Strontium (Sr)-Dissolved	0.127	0.132	0.131	0.134	0.131
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000144	0.000151	0.000143	0.000148	0.000150
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUL-42 (Quesnel Lake Mitchell Bay)

Date Sampled	17-Sep-15	17-Sep-15	17-Sep-15
Depth	**0m**	**10m**	**20m**
Physical Tests			
Conductivity (µS/cm)	107	107	109
Hardness (as CaCO3)	51	51.4	52
pH (pH)	7.97	7.95	7.88
Total Suspended Solids	<3.0	<3.0	<3.0
Total Dissolved Solids	63	70	67
Turbidity (ntu)	0.24	0.34	0.26
Anions and Nutrients			
Alkalinity, Total (as CaCO3)	49.0	48.7	50.2
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50
Fluoride (F)	0.033	0.033	0.032
Nitrate and Nitrite (as N)	0.0517	0.0536	0.113
Nitrate (as N)	0.052	0.054	0.113
Nitrite (as N)	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.114	0.117	0.166
Orthophosphate-Dissolved (as P)	0.0012	0.0051	0.0037
Phosphorus (P)-Total Dissolved	<0.0020	0.005	0.0032
Phosphorus (P)-Total	<0.0020	0.0121	0.007
Sulfate (SO4)	6.49	6.48	6.43
Organic / Inorganic Carbon			
Dissolved Organic Carbon	1.80	1.62	1.79
Total Metals			
Aluminum (Al)-Total	0.0106	0.0146	0.0185
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00011	0.00011	0.00012
Barium (Ba)-Total	0.00506	0.00513	0.00530
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.0	17.2	17.2
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00054	0.00064	0.00074
Iron (Fe)-Total	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	1.87	1.89	1.90
Manganese (Mn)-Total	0.00076	0.00099	0.00140
Molybdenum (Mo)-Total	0.000306	0.000302	0.000349
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.450	0.457	0.471
Selenium (Se)-Total	0.000102	0.000091	0.000076
Silicon (Si)-Total	1.37	1.41	1.52
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.883	0.908	0.968
Strontium (Sr)-Total	0.132	0.134	0.133
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000150	0.000150	0.000155
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030
Dissolved Metals			
Aluminum (Al)-Dissolved	0.0066	0.0065	0.0057
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00011	<0.00010	<0.00010
Barium (Ba)-Dissolved	0.00487	0.00499	0.00504
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.3	17.4	17.6
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	<0.00050	0.00067	0.00058
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000055	<0.000050
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.89	1.91	1.94
Manganese (Mn)-Dissolved	0.00015	0.00021	0.00011
Molybdenum (Mo)-Dissolved	0.000277	0.000294	0.000310
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.455	0.446	0.462
Selenium (Se)-Dissolved	0.000093	0.000097	0.000084
Silicon (Si)-Dissolved	1.39	1.39	1.53
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.874	0.892	0.916
Strontium (Sr)-Dissolved	0.130	0.129	0.132
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000141	0.000142	0.000143
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUL-120a (Quesnel Lake Beyond Cariboo Island)

Date Sampled	22-Jul-15	22-Jul-15	22-Jul-15	22-Jul-15	22-Jul-15	12-Aug-15	12-Aug-15	12-Aug-15	12-Aug-15	12-Aug-15
Depth	**0m**	**40m**	**80m**	**120m**	**190m**	**0m**	**40m**	**80m**	**120m**	**190m**
Physical Tests										
Conductivity (µS/cm)	104	112	111	113	112	106	110	111	112	113
Hardness (as CaCO3)	52.5	55.3	55.9	55.6	56.5	51.4	53.7	53.6	53.9	54.8
pH (pH)	7.87	7.88	7.88	7.89	7.88	7.98	7.88	7.91	7.91	7.89
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	63	70	62	65	64	68	72	67	70	74
Turbidity (ntu)	0.23	0.16	0.13	0.13	0.13	0.21	0.18	0.19	0.20	0.18
Anions and Nutrients										
Alkalinity, Total (as CaCO3)	47.2	48.6	50.0	48.8	49.0	48.7	51.2	51.1	52.1	52.3
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.033	0.034	0.033	0.033	0.031	0.033	0.033	0.033	0.034
Nitrate and Nitrite (as N)	0.054	0.139	0.144	0.143	0.144	0.052	0.143	0.145	0.145	0.151
Nitrate (as N)	0.054	0.139	0.144	0.143	0.144	0.052	0.143	0.145	0.145	0.151
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.121	0.188	0.187	0.182	0.185	0.097	0.171	0.166	0.167	0.166
Orthophosphate-Dissolved (as P)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	0.0023	<0.0020	0.0022	<0.0020
Sulfate (SO4)	5.81	6.13	6.13	6.09	6.09	6.25	6.41	6.40	6.39	6.46
Organic / Inorganic Carbon										
Dissolved Organic Carbon	2.22	1.82	1.75	1.81	1.75	1.82	1.77	1.60	1.74	1.60
Total Metals										
Aluminum (Al)-Total	0.0138	0.0111	0.0120	0.0122	0.0119	0.0106	0.0131	0.0101	0.0105	0.0098
Antimony (Sb)-Total	0.0001	0.00013	0.00013	0.00012	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00016	0.00013	0.00012	0.00012	0.00011	0.00011	0.00010	0.00011	<0.00010	0.00011
Barium (Ba)-Total	0.00595	0.00567	0.00542	0.00568	0.00562	0.00504	0.00522	0.00503	0.00506	0.00518
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.1	18.1	17.7	18.2	18.6	17.4	18.5	18.2	18.1	18.6
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00062	0.00125	0.00061	0.00071	0.00069
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000065	0.000063	<0.000050	0.000078	<0.000050	0.000116	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total	<0.0010	<0.0010	0.0011	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	2.05	2.05	1.99	2.05	2.11	1.97	2.12	2.06	2.06	2.07
Manganese (Mn)-Total	0.00204	0.00120	0.00083	0.00074	0.00074	0.00038	0.00119	0.00065	0.00072	0.00090
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Total	0.000376	0.000378	0.000327	0.000333	0.000317	0.000343	0.000398	0.000338	0.000343	0.000324
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.496	0.500	0.481	0.486	0.486	0.484	0.505	0.474	0.480	0.483
Selenium (Se)-Total	0.000113	0.000082	0.000110	0.000081	0.000100	0.000088	0.000101	0.000083	0.000082	0.000085
Silicon (Si)-Total	1.64	1.75	1.68	1.74	1.79	1.50	1.76	1.70	1.70	1.71
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.894	0.949	0.914	0.937	0.910	0.865	0.974	0.922	0.898	0.902
Strontium (Sr)-Total	0.117	0.134	0.132	0.136	0.135	0.128	0.140	0.138	0.139	0.140
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000139	0.000156	0.000155	0.000157	0.000159	0.000155	0.000176	0.000171	0.000169	0.000176
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals										
Aluminum (Al)-Dissolved	0.0088	0.0052	0.0055	0.0052	0.0053	0.0089	0.0095	0.0054	0.0053	0.0050
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00011	<0.00010	<0.00010	<0.00010	0.00010	<0.00010	0.00010	<0.00010	0.00010	<0.00010
Barium (Ba)-Dissolved	0.00580	0.00561	0.00541	0.00543	0.00544	0.00502	0.00495	0.00501	0.00498	0.00492
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.6	18.7	18.9	18.8	19.1	17.4	18.1	18.1	18.2	18.5
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	<0.00050	0.00079	0.00162	0.00086	0.00203	0.00051	0.00134	0.00071	0.00064	0.00068
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000238	0.000164	0.000082	0.000103	<0.000050	0.000065	0.000054	<0.000050	<0.000050
Lithium (Li)-Dissolved	<0.0010	0.001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	2.06	2.09	2.10	2.09	2.12	1.93	2.04	2.03	2.04	2.06
Manganese (Mn)-Dissolved	0.00027	0.00025	0.00015	0.00016	0.00015	0.00085	0.00027	0.00015	0.00016	0.00017
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000343	0.000364	0.000326	0.000320	0.000317	0.000311	0.000370	0.000338	0.000329	0.000294
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.493	0.507	0.515	0.506	0.507	0.471	0.497	0.491	0.491	0.482
Selenium (Se)-Dissolved	0.000115	0.000106	0.000090	0.000081	0.000090	0.000095	0.000077	0.000086	0.000073	0.000081
Silicon (Si)-Dissolved	1.63	1.75	1.75	1.74	1.78	1.50	1.69	1.65	1.68	1.71
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.871	0.942	0.935	0.945	0.954	0.819	0.946	0.912	0.915	0.886
Strontium (Sr)-Dissolved	0.116	0.132	0.134	0.132	0.133	0.127	0.137	0.134	0.136	0.137
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000136	0.000150	0.000158	0.000154	0.000155	0.000151	0.000160	0.000162	0.000158	0.000161
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1

QUL-120a (Quesnel Lake Beyond Cariboo Island)

Date Sampled	14-Sep-15	14-Sep-15	14-Sep-15	14-Sep-15	14-Sep-15
Depth	**0m**	**40m**	**80m**	**120m**	**190m**
Physical Tests					
Conductivity (µS/cm)	108	111	111	109	111
Hardness (as CaCO3)	53.6	55.2	55.0	56.2	55.4
pH (pH)	7.85	7.82	7.80	7.75	7.79
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	67	72	72	67	74
Turbidity (ntu)	0.21	0.51	0.81	0.28	0.28
Anions and Nutrients					
Alkalinity, Total (as CaCO3)	48.9	51.2	50.6	49.8	50.7
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.031	0.033	0.034	0.032	0.033
Nitrate and Nitrite (as N)	0.051	0.144	0.150	0.148	0.150
Nitrate (as N)	0.051	0.144	0.150	0.148	0.150
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.498	0.195	0.198	0.189	0.193
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	<0.0020	0.0023	0.0025	<0.0020	<0.0020
Sulfate (SO4)	6.51	6.43	6.40	6.40	6.43
Organic / Inorganic Carbon					
Dissolved Organic Carbon	1.73	1.77	1.79	1.75	1.65
Total Metals					
Aluminum (Al)-Total	0.0121	0.2230	0.0349	0.0184	0.0196
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00014	0.00022	0.00015	0.00013	0.00013
Barium (Ba)-Total	0.00513	0.00813	0.00558	0.00527	0.00518
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	18.1	18.2	18.6	18.1	18.3
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	0.00017	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00058	0.00728	0.00172	0.00094	0.00091
Iron (Fe)-Total	<0.030	0.173	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.000189	0.000096	<0.000050	0.000055
Lithium (Li)-Total	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	2.00	2.16	2.07	2.03	2.03
Manganese (Mn)-Total	0.00100	0.00889	0.00144	0.00082	0.00090
Mercury (Hg) - Total	-	-	-	-	-
Molybdenum (Mo)-Total	0.000316	0.000372	0.000344	0.000335	0.000309
Nickel (Ni)-Total	<0.00050	0.00051	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.512	0.572	0.536	0.527	0.513
Selenium (Se)-Total	0.000099	0.000084	0.000083	0.000071	0.000074
Silicon (Si)-Total	1.47	2.07	1.82	1.67	1.68
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.879	0.990	0.990	0.973	0.978
Strontium (Sr)-Total	0.136	0.138	0.139	0.139	0.141
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	0.011	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000151	0.000160	0.000159	0.000156	0.000156
Vanadium (V)-Total	<0.00050	0.00075	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals					
Aluminum (Al)-Dissolved	0.0072	0.0053	0.0079	0.0051	0.0057
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00011	0.00011	<0.00010	<0.00010	0.00010
Barium (Ba)-Dissolved	0.00498	0.00517	0.00528	0.00516	0.00512
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	18.2	18.7	18.6	19.0	18.8
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	<0.00050	0.00081	0.00093	0.00062	0.00074
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000059	0.000111	0.000063	0.000120
Lithium (Li)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	1.99	2.08	2.08	2.13	2.06
Manganese (Mn)-Dissolved	0.00023	0.00028	0.00042	0.00016	0.00016
Mercury (Hg) - Dissolved	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000315	0.000355	0.000375	0.000322	0.000317
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.500	0.512	0.527	0.511	0.518
Selenium (Se)-Dissolved	0.000092	0.000090	0.000093	0.000070	0.000087
Silicon (Si)-Dissolved	1.45	1.72	1.70	1.74	1.69
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.869	0.987	0.996	0.954	0.964
Strontium (Sr)-Dissolved	0.134	0.137	0.138	0.139	0.139
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000145	0.000149	0.000157	0.000153	0.000156
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	0.0031	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
P1 (Polley Lake North)

Date Sampled	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	11-Aug-15	11-Aug-15	11-Aug-15	11-Aug-15
Depth	**Surface**	**5m**	**10m**	**15m**	**20m**	**Bottom**	**Surface**	**5m**	**10m**	**15m**
Physical Tests										
Conductivity (µS/cm)	282	284	287	287	287	289	288	290	295	292
Hardness (as CaCO3)	131	128	130	131	131	134	132	135	134	133
pH (pH)	8.52	8.46	8.19	8.15	8.14	8.13	8.31	8.31	8.14	8.09
Total Suspended Solids	<3.0	4.4	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	186	179	177	188	183	191	180	208	211	199
Turbidity (ntu)	0.69	0.93	0.90	0.40	0.39	0.50	0.47	0.58	0.88	0.83
Anions and Nutrients										
Alkalinity, Total (as CaCO3)	99.0	99.2	98.8	97.2	99.1	99.3	98.9	98.9	100.0	98.5
Ammonia, Total (as N)	0.0061	0.0053	0.0051	<0.0050	<0.0050	0.0073	<0.0050	<0.0050	0.0052	0.0076
Chloride (Cl)	1.28	1.28	1.32	1.33	1.33	1.34	1.31	1.31	1.34	1.35
Fluoride (F)	0.088	0.088	0.087	0.086	0.086	0.086	0.089	0.089	0.088	0.081
Nitrate and Nitrite (as N)	<0.0051	<0.0051	0.191	0.304	0.374	0.422	<0.0051	<0.0051	0.151	0.353
Nitrate (as N)	<0.0050	<0.0050	0.191	0.304	0.374	0.421	<0.0050	<0.0050	0.151	0.351
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	0.0014
Total Nitrogen	0.367	0.392	0.542	0.584	<3.0	0.689	0.335	0.456	0.449	0.600
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	0.0296	0.0434	0.0595	<0.0010	<0.0010	0.0014	0.0429
Phosphorus (P)-Total Dissolved	0.0079	0.0083	0.0066	0.0354	0.0498	0.0659	0.0064	0.0072	0.0072	0.0458
Phosphorus (P)-Total	0.016	0.018	0.016	0.044	0.049	0.065	0.007	0.037	0.010	0.039
Sulfate (SO4)	46.9	46.8	47.1	47.2	47.3	47.4	47.4	47.3	47.3	47.3
Organic / Inorganic Carbon										
Dissolved Organic Carbon	6.43	6.77	6.25	6.24	6.07	6.06	6.44	6.45	6.32	6.21
Total Metals										
Aluminum (Al)-Total	0.0140	0.0161	0.0193	0.0136	0.0112	0.0162	0.0140	0.0192	0.0519	0.0222
Antimony (Sb)-Total	0.00023	0.00025	0.00024	0.00022	0.00023	0.00024	0.00016	0.00017	0.00017	0.00016
Arsenic (As)-Total	0.00099	0.00103	0.00099	0.00096	0.00098	0.00100	0.00102	0.00099	0.00101	0.00094
Barium (Ba)-Total	0.0120	0.0121	0.0124	0.0121	0.0121	0.0128	0.0121	0.0125	0.0132	0.0119
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.030	0.031	0.032	0.030	0.030	0.032	0.027	0.028	0.029	0.029
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	41.8	42.5	43.1	41.7	42.0	43.0	41.8	42.1	43.2	42.4
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	<0.0035	<0.0035	<0.0030	<0.0025	<0.0025	<0.0030	0.00309	0.00343	0.00381	0.00263
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.042	<0.030
Lead (Pb)-Total	<0.000050	0.000655	0.000086	0.000058	0.000054	0.000099	<0.000050	0.000133	0.000097	<0.000050
Lithium (Li)-Total	0.0012	0.0012	0.0012	<0.0010	0.0011	0.0011	<0.0010	0.0012	0.0013	0.0013
Magnesium (Mg)-Total	5.66	5.68	5.68	5.51	5.53	5.63	5.72	5.57	5.87	5.40
Manganese (Mn)-Total	0.0101	0.0109	0.0257	0.0481	0.0690	0.1670	0.0078	0.0093	0.0604	0.0585
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-
Molybdenum (Mo)-Total	0.0112	0.0116	0.0113	0.0108	0.0110	0.0114	0.0112	0.0112	0.0111	0.0110
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	1.41	1.41	1.45	1.38	1.39	1.49	1.36	1.36	1.40	1.35
Selenium (Se)-Total	0.000911	0.000953	0.001020	0.000926	0.000888	0.000903	0.000931	0.000854	0.000904	0.000891
Silicon (Si)-Total	3.37	3.44	3.86	3.92	4.00	4.17	3.42	3.36	3.99	3.88
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	9.57	9.51	9.62	9.24	9.34	9.91	9.45	9.50	9.59	9.22
Strontium (Sr)-Total	0.313	0.323	0.326	0.311	0.314	0.333	0.315	0.314	0.319	0.319
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000270	0.000276	0.000274	0.000267	0.000276	0.000280	0.000279	0.000282	0.000288	0.000280
Vanadium (V)-Total	0.00111	0.00110	0.00095	0.00085	0.00086	0.00095	0.00122	0.00119	0.00106	0.00086
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals										
Aluminum (Al)-Dissolved	0.004	0.0032	<0.0030	<0.0030	<0.0030	<0.0030	0.0045	0.0041	<0.0030	<0.0030
Antimony (Sb)-Dissolved	0.00015	0.00016	0.00015	0.00015	0.00015	0.00015	0.00014	0.00014	0.00014	0.00013
Arsenic (As)-Dissolved	0.00101	0.00095	0.00096	0.00094	0.00097	0.00099	0.00099	0.00101	0.00093	0.00095
Barium (Ba)-Dissolved	0.0119	0.0118	0.0121	0.0122	0.0125	0.0125	0.0123	0.0124	0.0122	0.0115
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.027	0.027	0.027	0.027	0.028	0.028	0.025	0.025	0.025	0.025
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	43.2	42.0	42.9	43.1	43.2	44.1	43.1	44.5	44.1	43.7
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00282	0.00278	0.00238	0.00236	0.00244	0.00256	0.00274	0.00322	0.00254	0.00229
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000311	0.00016	0.000122	0.000125	0.000094	<0.000050	0.000153	0.000076	0.000051
Lithium (Li)-Dissolved	0.0011	0.0011	0.0011	0.0011	0.0011	<0.0010	0.001	<0.0010	<0.0010	0.001
Magnesium (Mg)-Dissolved	5.73	5.60	5.63	5.64	5.66	5.74	5.90	5.92	5.81	5.78
Manganese (Mn)-Dissolved	0.0023	0.0015	0.0091	0.0319	0.0532	0.1490	0.0022	0.0015	0.0363	0.0011
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-
Molybdenum (Mo)-Dissolved	0.0110	0.0110	0.0109	0.0107	0.0107	0.0108	0.0111	0.0113	0.0109	0.0107
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.45	1.36	1.41	1.45	1.45	1.45	1.40	1.39	1.34	1.40
Selenium (Se)-Dissolved	0.000973	0.000987	0.000938	0.000917	0.000925	0.000912	0.000937	0.000920	0.000860	0.000943
Silicon (Si)-Dissolved	3.44	3.37	3.85	3.97	4.05	4.20	3.47	3.47	3.86	4.08
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.58	9.25	9.28	9.24	9.67	9.76	9.49	9.49	9.18	9.45
Strontium (Sr)-Dissolved	0.312	0.313	0.316	0.317	0.318	0.319	0.316	0.316	0.315	0.315
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000258	0.000242	0.000254	0.000258	0.000261	0.000258	0.000266	0.000269	0.000274	0.000274
Vanadium (V)-Dissolved	0.00101	0.00099	0.00076	0.00078	0.00082	0.00082	0.00113	0.00108	0.00083	0.00071
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
P1 (Polley Lake North)

Date Sampled	11-Aug-15	11-Aug-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15
Depth	**20m**	**Bottom**	**Surface**	**5m**	**10m**	**15m**	**20m**	**Bottom**
Physical Tests								
Conductivity (µS/cm)	294	295	292	288	295	293	293	292
Hardness (as CaCO3)	136	137	132	130	132	130	130	128
pH (pH)	8.08	8.04	8.28	8.27	7.92	7.88	7.91	7.77
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	180	205	179	172	174	181	187	178
Turbidity (ntu)	1.54	1.04	0.49	0.49	0.55	0.86	1.22	1.46
Anions and Nutrients								
Alkalinity, Total (as CaCO3)	98.3	100.0	103.0	99.6	100.0	103.0	99.9	99.8
Ammonia, Total (as N)	<0.0050	0.0068	0.0060	0.0055	0.0155	<0.0050	<0.0050	<0.0050
Chloride (Cl)	1.36	1.36	1.33	1.33	1.36	1.36	1.37	1.37
Fluoride (F)	0.080	0.080	0.084	0.088	0.082	0.085	0.085	0.085
Nitrate and Nitrite (as N)	0.425	0.429	0.005	0.005	0.224	0.415	0.421	0.450
Nitrate (as N)	0.425	0.429	0.005	0.005	0.224	0.415	0.421	0.450
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.756	0.699	0.382	0.362	0.507	0.731	0.755	0.784
Orthophosphate-Dissolved (as P)	0.0687	0.0711	<0.0010	<0.0010	<0.0010	0.0639	0.0735	0.0779
Phosphorus (P)-Total Dissolved	0.0751	0.0759	0.0054	0.0052	0.0051	0.0659	0.0761	0.0793
Phosphorus (P)-Total	0.065	0.064	0.007	0.009	0.007	0.061	0.075	0.077
Sulfate (SO4)	47.4	47.5	47.9	48.0	47.5	47.6	47.7	47.6
Organic / Inorganic Carbon								
Dissolved Organic Carbon	6.00	6.12	6.47	6.65	6.31	6.05	5.98	6.16
Total Metals								
Aluminum (Al)-Total	0.0149	0.0158	0.0235	0.0273	0.0283	0.0268	0.0371	0.0257
Antimony (Sb)-Total	0.00016	0.00015	0.00015	0.00017	0.00014	0.00015	0.00013	0.00013
Arsenic (As)-Total	0.00096	0.00097	0.00103	0.00103	0.00096	0.00096	0.00102	0.00096
Barium (Ba)-Total	0.0126	0.0124	0.0133	0.0131	0.0128	0.0110	0.0110	0.0106
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.029	0.028	0.029	0.029	0.028	0.028	0.028	0.027
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	43.9	44.5	41.3	40.4	41.5	40.4	40.1	40.3
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00275	0.00267	0.00352	0.00368	0.00318	0.00306	0.00368	0.00329
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	0.041	0.036	<0.030
Lead (Pb)-Total	<0.000050	<0.000050	<0.000050	0.000228	0.000078	0.00006	0.000095	0.000094
Lithium (Li)-Total	0.001	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	5.81	5.81	5.95	5.81	5.91	5.75	5.80	5.80
Manganese (Mn)-Total	0.2560	0.2860	0.0112	0.0110	0.0424	0.0514	0.0925	0.1190
Mercury (Hg) - Total	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Total	0.0111	0.0110	0.0116	0.0116	0.0114	0.0111	0.0109	0.0107
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	1.38	1.37	1.50	1.47	1.46	1.47	1.49	1.48
Selenium (Se)-Total	0.000905	0.000911	0.000911	0.000884	0.000841	0.000876	0.000894	0.000887
Silicon (Si)-Total	4.27	4.28	3.53	3.45	4.01	4.16	4.25	4.29
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	9.41	9.44	9.87	9.84	9.62	9.61	9.73	9.66
Strontium (Sr)-Total	0.320	0.319	0.325	0.328	0.327	0.322	0.325	0.322
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000283	0.000280	0.000286	0.000283	0.000282	0.000275	0.000270	0.000267
Vanadium (V)-Total	0.00087	0.00092	0.00120	0.00123	0.00093	0.00080	0.00079	0.00071
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals								
Aluminum (Al)-Dissolved	<0.0030	<0.0030	0.0095	0.0055	0.0041	<0.0030	<0.0030	<0.0030
Antimony (Sb)-Dissolved	0.00013	0.00013	0.00014	0.00013	0.00014	0.00013	0.00011	0.00010
Arsenic (As)-Dissolved	0.00097	0.00103	0.00104	0.00107	0.00094	0.00098	0.00093	0.00098
Barium (Ba)-Dissolved	0.0113	0.0120	0.0130	0.0127	0.0124	0.0107	0.0101	0.0099
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.026	0.026	0.026	0.026	0.025	0.025	0.025	0.025
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	44.8	45.0	42.9	42.2	42.8	42.2	42.1	41.7
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00255	0.00268	0.00307	0.00309	0.00294	0.00256	0.00254	0.00249
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	0.000063	0.000082	<0.000050	0.000265	0.000168	0.000095	0.000064	0.000061
Lithium (Li)-Dissolved	0.0011	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	5.82	5.87	6.08	6.05	6.05	5.92	6.01	5.89
Manganese (Mn)-Dissolved	0.1470	0.1850	0.0067	0.0064	0.0395	0.0012	0.0008	0.0004
Mercury (Hg) - Dissolved	-	-	-	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.0106	0.0106	0.0108	0.0111	0.0105	0.0103	0.0099	0.0100
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.38	1.46	1.48	1.47	1.43	1.46	1.47	1.47
Selenium (Se)-Dissolved	0.000912	0.000932	0.000921	0.000949	0.000935	0.000928	0.000898	0.000901
Silicon (Si)-Dissolved	4.16	4.19	3.53	3.46	3.93	4.13	4.23	4.25
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.39	9.89	9.74	9.68	9.50	9.52	9.53	9.62
Strontium (Sr)-Dissolved	0.314	0.315	0.317	0.321	0.318	0.320	0.319	0.322
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000264	0.000267	0.000239	0.000260	0.000266	0.000258	0.000256	0.000255
Vanadium (V)-Dissolved	0.00072	0.00078	0.00112	0.00110	0.00090	0.00069	0.00058	0.00055
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
P2 (Polley Lake South)

Date Sampled	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	7-Jul-15	11-Aug-15	11-Aug-15	11-Aug-15	11-Aug-15	11-Aug-15
Depth	**Surface**	**5m**	**10m**	**15m**	**20m**	**Bottom**	**Surface**	**5m**	**10m**	**15m**	**20m**
Physical Tests											
Conductivity (µS/cm)	285	283	286	288	291	293	289	289	291	292	294
Hardness (as CaCO3)	132	130	130	131	132	130	131	131	131	132	132
pH (pH)	8.47	8.41	8.20	8.18	8.15	8.13	8.33	8.32	8.11	8.09	8.07
Total Suspended Solids	<3.0	3.1	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	175	190	179	180	178	187	197	194	187	212	218
Turbidity (ntu)	1.07	1.43	0.70	0.51	0.38	0.32	0.46	0.58	0.73	1.58	1.61
Anions and Nutrients											
Alkalinity, Total (as CaCO3)	99.3	97.9	98.7	98.5	99.0	99.7	99.4	98.8	98.4	98.7	97.8
Ammonia, Total (as N)	0.0058	0.0062	0.0063	<0.0050	<0.0050	0.0052	<0.0050	<0.0050	<0.0050	0.0226	<0.0050
Chloride (Cl)	1.29	1.29	1.33	1.33	1.33	1.34	1.31	1.31	1.35	1.35	1.36
Fluoride (F)	0.089	0.088	0.086	0.087	0.087	0.086	0.090	0.090	0.088	0.087	0.081
Nitrate and Nitrite (as N)	<0.0051	<0.0051	0.209	0.311	0.388	0.422	<0.0051	<0.0051	0.160	0.307	0.418
Nitrate (as N)	<0.0050	<0.0050	0.209	0.311	0.388	0.422	<0.0050	<0.0050	0.159	0.305	0.418
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	0.0017	<0.0010
Total Nitrogen	0.359	0.399	0.530	0.578	0.626	0.673	0.326	0.351	0.441	0.580	0.654
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	0.0298	0.0479	0.0561	<0.0010	<0.0010	<0.0010	0.0312	0.0670
Phosphorus (P)-Total Dissolved	0.0079	0.0081	0.0071	0.0355	0.0526	0.0653	0.0056	0.0062	0.0047	0.0355	0.0682
Phosphorus (P)-Total	0.015	0.019	0.013	0.037	0.052	0.061	0.006	0.011	0.007	0.032	0.060
Sulfate (SO4)	46.9	46.7	47.1	47.2	47.3	47.4	47.5	47.5	47.3	47.3	47.4
Organic / Inorganic Carbon											
Dissolved Organic Carbon	6.68	6.63	6.35	5.98	6.04	6.00	6.48	6.53	6.26	5.93	6.19
Total Metals											
Aluminum (Al)-Total	0.0353	0.0333	0.0138	0.0127	0.0124	0.0129	0.0148	0.0176	0.0276	0.0406	0.0220
Antimony (Sb)-Total	0.00026	0.00025	0.00024	0.00022	0.00023	0.00023	0.00016	0.00016	0.00016	0.00015	0.00015
Arsenic (As)-Total	0.00107	0.00109	0.00098	0.00102	0.00104	0.00101	0.00103	0.00101	0.00097	0.00099	0.00097
Barium (Ba)-Total	0.0128	0.0129	0.0122	0.0124	0.0126	0.0127	0.0124	0.0122	0.0125	0.0126	0.0120
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.032	0.030	0.031	0.029	0.031	0.031	0.028	0.028	0.028	0.028	0.028
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	43.3	43.9	42.2	42.3	43.2	42.7	42.5	42.0	42.6	42.2	41.3
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00393	0.00403	<0.0030	<0.0030	<0.0030	<0.0030	0.00313	0.00318	0.00314	0.00327	0.00286
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	0.00012	0.000053	<0.000050	0.000054	<0.000050	<0.000050	0.000151	0.00011	0.000079	0.000052
Lithium (Li)-Total	0.0012	<0.0010	0.0012	<0.0010	0.0013	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011
Magnesium (Mg)-Total	5.82	5.85	5.52	5.62	5.65	5.62	5.68	5.76	5.77	5.45	5.34
Manganese (Mn)-Total	0.0119	0.0159	0.0268	0.0602	0.1200	0.1460	0.0073	0.0082	0.0259	0.0799	0.2100
Mercury (Hg) - Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Total	0.0116	0.0117	0.0112	0.0111	0.0115	0.0114	0.0113	0.0113	0.0113	0.0111	0.0108
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	1.41	1.44	1.39	1.40	1.48	1.46	1.36	1.37	1.39	1.38	1.37
Selenium (Se)-Total	0.000888	0.000949	0.000893	0.000910	0.000983	0.000956	0.000931	0.000907	0.000938	0.000936	0.000880
Silicon (Si)-Total	3.60	3.68	3.87	4.03	4.12	4.14	3.42	3.46	3.89	3.97	3.96
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	9.52	9.73	9.31	9.32	9.75	9.73	9.43	9.35	9.43	9.40	9.16
Strontium (Sr)-Total	0.324	0.329	0.316	0.322	0.329	0.327	0.314	0.311	0.320	0.318	0.313
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000289	0.000298	0.000270	0.000293	0.000300	0.000285	0.000284	0.000285	0.000287	0.000285	0.000277
Vanadium (V)-Total	0.00118	0.00120	0.00091	0.00085	0.00091	0.00096	0.00119	0.00124	0.00095	0.00092	0.00089
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals											
Aluminum (Al)-Dissolved	0.0064	0.0046	<0.0030	<0.0030	<0.0030	<0.0030	0.0042	0.0041	<0.0030	<0.0030	<0.0030
Antimony (Sb)-Dissolved	0.00016	0.00016	0.00014	0.00015	0.00014	0.00015	0.00014	0.00014	0.00013	0.00013	0.00013
Arsenic (As)-Dissolved	0.00100	0.00097	0.00094	0.00098	0.00096	0.00097	0.00098	0.00099	0.00091	0.00092	0.00092
Barium (Ba)-Dissolved	0.0125	0.0125	0.0126	0.0125	0.0123	0.0125	0.0124	0.0122	0.0121	0.0113	0.0112
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.027	0.027	0.027	0.028	0.026	0.026	0.026	0.026	0.025	0.025	0.025
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	0.0000102	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	43.4	42.7	42.9	43.3	43.4	42.8	43.0	42.7	43.2	43.4	43.4
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00298	0.00292	0.00239	0.00234	0.00235	0.00248	0.00275	0.00282	0.00257	0.00244	0.00230
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	0.000179	0.000091	0.000101	0.000063	0.000073	<0.000050	0.000271	0.000151	0.000106	0.000074
Lithium (Li)-Dissolved	0.0011	<0.0010	0.0012	0.0011	<0.0010	<0.0010	0.0011	0.0011	0.001	0.0011	0.001
Magnesium (Mg)-Dissolved	5.68	5.69	5.66	5.62	5.70	5.67	5.78	5.81	5.56	5.64	5.69
Manganese (Mn)-Dissolved	0.0025	0.0015	0.0125	0.0430	0.0958	0.1300	0.0021	0.0016	0.0089	0.0033	0.1000
Mercury (Hg) - Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	-	-	-	-	-
Molybdenum (Mo)-Dissolved	0.0111	0.0113	0.0109	0.0108	0.0111	0.0108	0.0111	0.0110	0.0108	0.0106	0.0107
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.40	1.43	1.46	1.46	1.44	1.49	1.37	1.38	1.34	1.37	1.40
Selenium (Se)-Dissolved	0.000897	0.000924	0.000937	0.000938	0.000891	0.000905	0.000926	0.000937	0.000912	0.000915	0.000935
Silicon (Si)-Dissolved	3.47	3.53	3.90	4.02	4.09	4.09	3.43	3.45	3.74	4.01	4.12
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.52	9.72	9.60	9.48	9.69	9.73	9.35	9.33	9.17	9.17	9.32
Strontium (Sr)-Dissolved	0.318	0.317	0.316	0.318	0.321	0.319	0.316	0.310	0.309	0.312	0.318
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000259	0.000264	0.000272	0.000276	0.000269	0.000264	0.000272	0.000267	0.000271	0.000271	0.000269
Vanadium (V)-Dissolved	0.00104	0.00100	0.00080	0.00079	0.00083	0.00082	0.00115	0.00110	0.00081	0.00070	0.00069
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
P2 (Polley Lake South)

Date Sampled	11-Aug-15	25-Aug-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15	10-Sep-15
Depth	**Bottom**	**Surface**	**Surface**	**5m**	**10m**	**15m**	**20m**	**Bottom**
Physical Tests								
Conductivity (µS/cm)	298	290	286	283	287	290	292	291
Hardness (as CaCO3)	133	137	130	128	130	131	131	132
pH (pH)	8.06	8.37	8.28	8.27	8.26	7.86	7.77	7.82
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	7.7
Total Dissolved Solids	214	189	198	191	201	198	193	210
Turbidity (ntu)	1.61	0.42	0.48	0.61	0.63	1.27	1.82	6.37
Anions and Nutrients								
Alkalinity, Total (as CaCO3)	100.0	95.9	97.8	96.9	99.5	97.1	97.2	97.2
Ammonia, Total (as N)	0.0109	0.0082	<0.0050	<0.0050	<0.0050	0.0107	<0.0050	<0.0050
Chloride (Cl)	1.36	1.36	1.33	1.33	1.33	1.34	1.37	1.37
Fluoride (F)	0.080	0.086	0.088	0.088	0.088	0.089	0.086	0.085
Nitrate and Nitrite (as N)	0.431	<0.0051	<0.0051	<0.0051	<0.0051	0.014	0.454	0.453
Nitrate (as N)	0.430	<0.0050	<0.0050	<0.0050	<0.0050	0.014	0.454	0.453
Nitrite (as N)	0.0014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.676	0.309	0.370	0.358	0.373	0.781	0.777	0.803
Orthophosphate-Dissolved (as P)	0.0727	0.0013	<0.0010	<0.0010	<0.0010	0.0502	0.0781	0.0782
Phosphorus (P)-Total Dissolved	0.0767	0.0065	0.0048	0.0052	0.0049	0.0542	0.0820	0.0819
Phosphorus (P)-Total	0.063	0.006	0.007	0.008	0.012	0.054	0.072	0.097
Sulfate (SO4)	47.3	48.6	48.0	47.9	48.0	47.9	47.7	47.7
Organic / Inorganic Carbon								
Dissolved Organic Carbon	6.08	6.35	6.55	6.34	6.37	6.29	6.46	6.41
Total Metals								
Aluminum (Al)-Total	0.0185	0.0163	0.0186	0.0193	0.0245	0.0475	0.0226	0.1570
Antimony (Sb)-Total	0.00015	0.00015	0.00025	0.00026	0.00024	0.00021	0.00020	0.00021
Arsenic (As)-Total	0.00096	0.00104	0.00101	0.00102	0.00101	0.00099	0.00099	0.00104
Barium (Ba)-Total	0.0127	0.0131	0.0136	0.0133	0.0136	0.0125	0.0111	0.0133
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	0.028	0.027	0.030	0.030	0.030	0.031	0.030	0.030
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	42.1	42.0	42.6	42.5	42.8	43.0	43.6	43.6
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012
Copper (Cu)-Total	0.00273	0.00327	0.00324	0.00320	0.00329	0.00336	0.00283	0.00619
Iron (Fe)-Total	<0.030	<0.030	<0.030	<0.030	<0.030	0.038	<0.030	0.114
Lead (Pb)-Total	<0.000050	<0.000050	<0.000050	0.000061	0.000052	0.000061	<0.000050	0.000051
Lithium (Li)-Total	0.0011	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total	5.62	5.49	5.82	5.80	5.82	5.77	5.84	5.88
Manganese (Mn)-Total	0.3310	0.0078	0.0111	0.0114	0.0118	0.0750	0.1190	0.1200
Mercury (Hg) - Total	-	-						
Molybdenum (Mo)-Total	0.0107	0.0115	0.0112	0.0113	0.0114	0.0107	0.0106	0.0105
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	1.37	1.44	1.53	1.50	1.50	1.52	1.53	1.56
Selenium (Se)-Total	0.000836	0.000882	0.000859	0.000847	0.000895	0.000889	0.000884	0.000833
Silicon (Si)-Total	4.15	3.30	3.43	3.43	3.43	4.24	4.37	4.63
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	9.13	10.50	10.10	10.00	9.88	9.86	9.97	9.91
Strontium (Sr)-Total	0.312	0.316	0.321	0.324	0.322	0.323	0.323	0.327
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000025	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000273	0.000296	0.000311	0.000292	0.000298	0.000290	0.000279	0.000285
Vanadium (V)-Total	0.00087	0.00131	0.00131	0.00126	0.00128	0.00087	0.00078	0.00108
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals								
Aluminum (Al)-Dissolved	<0.0030	0.0054	0.0054	0.0055	0.0069	<0.0030	<0.0030	<0.0030
Antimony (Sb)-Dissolved	0.00012	0.00015	0.00016	0.00015	0.00015	0.00013	0.00013	0.00014
Arsenic (As)-Dissolved	0.00094	0.00104	0.00097	0.00098	0.00097	0.00093	0.00094	0.00094
Barium (Ba)-Dissolved	0.0115	0.0126	0.0133	0.0132	0.0134	0.0112	0.0101	0.0101
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	0.025	0.026	0.027	0.027	0.028	0.027	0.028	0.027
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	43.5	45.1	42.6	41.9	42.5	43.2	42.9	43.5
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00227	0.00291	0.00278	0.00295	0.00287	0.00245	0.00220	0.00231
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	0.000061	<0.000050	<0.000050	0.000077	0.000082	<0.000050	0.000057	<0.000050
Lithium (Li)-Dissolved	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved	5.78	5.86	5.75	5.74	5.78	5.72	5.68	5.74
Manganese (Mn)-Dissolved	0.2100	0.0031	0.0048	0.0049	0.0047	0.0112	0.0004	0.0011
Mercury (Hg) - Dissolved	-	-						
Molybdenum (Mo)-Dissolved	0.0107	0.0110	0.0109	0.0109	0.0108	0.0102	0.0099	0.0097
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	1.39	1.44	1.51	1.49	1.52	1.51	1.54	1.54
Selenium (Se)-Dissolved	0.000897	0.000952	0.000857	0.000878	0.000915	0.000876	0.000816	0.000866
Silicon (Si)-Dissolved	4.21	3.44	3.35	3.36	3.36	4.13	4.22	4.24
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	9.36	10.50	9.86	9.82	10.00	9.64	9.91	9.96
Strontium (Sr)-Dissolved	0.318	0.315	0.315	0.312	0.315	0.313	0.316	0.314
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000264	0.000286	0.000282	0.000284	0.000274	0.000272	0.000268	0.000269
Vanadium (V)-Dissolved	0.00071	0.00119	0.00108	0.00109	0.00107	0.00060	0.00055	0.00053
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 1
QUR-1 (Quesnel River at Research Centre)

Date Sampled	13-Jul-15	27-Jul-15	10-Aug-15	24-Aug-15	8-Sep-15	21-Sep-15
Physical Tests						
Conductivity (µS/cm)	105	108	109	108	106	111
Hardness (as CaCO3)	53.3	51.3	52.8	56.4	52.9	54.8
pH	7.87	7.91	7.95	7.88	7.96	7.95
Total Suspended Solids	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	82	73	69	69	70	71
Turbidity (ntu)	0.40	0.25	0.39	0.19	0.27	0.24
Anions and Nutrients						
Alkalinity, Total (as CaCO3)	47.7	48.5	49.5	49.8	51.2	51.4
Ammonia, Total (as N)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chloride (Cl)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.033	0.032	0.033	0.032	0.032	0.032
Nitrate and Nitrite (as N)	0.0686	0.068	0.0573	0.0681	0.0561	0.0585
Nitrate (as N)	0.0686	0.0680	0.0573	0.0681	0.0561	0.0585
Nitrite (as N)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Nitrogen	0.190	0.141	0.127	0.141	0.124	0.113
Orthophosphate-Dissolved (as P)	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010
Phosphorus (P)-Total Dissolved	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	0.0086	0.0039	<0.0020	<0.0020	<0.0020	0.0031
Sulfate (SO4)	6.15	6.26	6.15	6.54	6.30	6.28
Organic / Inorganic Carbon						
Dissolved Organic Carbon	2.11	1.85	1.85	1.56	1.87	1.56
Total Metals						
Aluminum (Al)-Total	0.0258	0.0207	0.0165	0.0147	0.0126	0.0137
Antimony (Sb)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.00016	0.00016	0.00016	0.00015	0.00018	0.00012
Barium (Ba)-Total	0.00536	0.00557	0.00524	0.00494	0.00496	0.00500
Beryllium (Be)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Total	17.9	17.4	17.5	19.0	17.6	18.5
Chromium (Cr)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.00072	0.00073	0.00075	0.00067	0.00066	0.00105
Iron (Fe)-Total	0.031	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Total	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000065
Lithium (Li)-Total	<0.0010	0.001	<0.0010	0.0013	<0.0010	<0.0010
Magnesium (Mg)-Total	2.08	1.98	1.93	2.03	1.91	2.05
Manganese (Mn)-Total	0.00228	0.00183	0.00152	0.00092	0.00093	0.00101
Mercury (Hg)-Total	<0.0000050	<0.0000050	-	-	-	-
Molybdenum (Mo)-Total	0.000351	0.000486	0.000346	0.000340	0.000559	0.000323
Nickel (Ni)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Total	0.514	0.500	0.497	0.471	0.502	0.459
Selenium (Se)-Total	0.000105	0.000127	0.000102	0.000087	0.000083	0.000103
Silicon (Si)-Total	1.72	1.60	1.55	1.58	1.50	1.53
Silver (Ag)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Total	0.958	1.040	0.903	0.940	0.894	0.935
Strontium (Sr)-Total	0.125	0.125	0.126	0.134	0.132	0.134
Thallium (Tl)-Total	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Total	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total	0.000148	0.000169	0.000156	0.000164	0.000186	0.000147
Vanadium (V)-Total	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Dissolved Metals						
Aluminum (Al)-Dissolved	0.0085	0.0080	0.0095	0.0067	0.0078	0.0133
Antimony (Sb)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	0.00015	0.00014	0.00012	0.00012	0.00013	0.00016
Barium (Ba)-Dissolved	0.00515	0.00527	0.00516	0.00490	0.00483	0.00490
Beryllium (Be)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca)-Dissolved	17.9	17.4	18.0	19.2	18.0	18.6
Chromium (Cr)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Dissolved	0.00052	0.00050	0.00054	<0.00050	0.00050	0.00064
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	0.0012
Magnesium (Mg)-Dissolved	2.06	1.93	1.93	2.06	1.93	2.05
Manganese (Mn)-Dissolved	0.00047	0.00032	0.00041	0.00024	0.00040	0.00108
Mercury (Hg)-Dissolved	<0.0000050	<0.0000050	-	-	-	-
Molybdenum (Mo)-Dissolved	0.000333	0.000347	0.000334	0.000282	0.000305	0.000315
Nickel (Ni)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Potassium (K)-Dissolved	0.495	0.492	0.484	0.454	0.477	0.469
Selenium (Se)-Dissolved	0.000137	0.000102	0.000106	0.000099	0.000070	0.000133
Silicon (Si)-Dissolved	1.65	1.54	1.54	1.56	1.50	1.51
Silver (Ag)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved	0.927	0.988	0.887	0.919	0.847	0.971
Strontium (Sr)-Dissolved	0.119	0.121	0.124	0.133	0.129	0.137
Thallium (Tl)-Dissolved	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin (Sn)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.000141	0.000153	0.000149	0.000144	0.000135	0.000158
Vanadium (V)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030

Note: Units are mg/L unless otherwise stated

Appendix 2

Appendix 2
In-situ Data

Site Name	Date	Temp °C	Cond µS/cm	ODO mg/L	pH	Turbidity FNU	Secchi Depth (m)
Quesnel Lake							
QUL-2a-0m	1-Jul-15	17.845	103.7	10.21	7.35	0.76	8.5
QUL-2a-40m	1-Jul-15	5.092	124.6	10.36	7.69	0.63	
QUL-2a-60m	1-Jul-15	4.374	126.6	10.52	7.63	0.72	
QUL-2a-0m	26-Aug-15	17.635	141.7	9.53	7.84	0.15	14.05
QUL-2a-40m	26-Aug-15	4.621	150.4	10.58	7.59	0.19	
QUL-2a-60m	26-Aug-15	4.51	150.9	10.47	7.63	0.21	
QUL-2a-0m	14-Sep-15	15.014	177.4	9.64	8.43	0.56	10
QUL-2a-40m	14-Sep-15	4.943	184.4	10.61	7.81	0.5	
QUL-2a-60m	14-Sep-15	4.478	184.7	10.59	7.67	0.64	
QUL-18-0m	1-Jul-15	18.922	105.7	9.79	7.34	0.79	8.5
QUL-18-40m	1-Jul-15	4.728	126.9	10.63	7.53	0.6	
QUL-18-80m	1-Jul-15	4.418	130.4	10.62	7.45	0.75	
QUL-18-0m	10-Aug-15	18.717	49	8.99	8.23	0.4	11
QUL-18-40m	10-Aug-15	4.682	141.6	10.55	8.31	0.05	
QUL-18-80m	10-Aug-15	4.21	143.7	10.43	8.16	0.12	
QUL-18-0m	2-Sep-15	16.389	140.7	9.47	8.06	0.63	13.5
QUL-18-40m	2-Sep-15	4.761	146.6	10.61	7.83	0.76	
QUL-18-80m	2-Sep-15	4.393	148.8	10.62	7.64	0.86	
QUL-40a-0m	15-Jul-15	20.142	118	9.69	7.42	0.46	8
QUL-40a-40m	15-Jul-15	4.679	131	10.95	7.5	0.39	
QUL-40a-80m	15-Jul-15	3.991	131.4	11.02	7.48	0.32	
QUL-40a-120m	15-Jul-15	3.496	131.8	10.89	7.47	0.31	
QUL-40a-140m	15-Jul-15	3.709	132.2	10.83	7.41	0.31	
QUL-40a-0m	17-Aug-15	19.565	58.9	8.6	7.85	48	9.5
QUL-40a-40m	17-Aug-15	4.671	146.8	10.73	7.8	0.05	
QUL-40a-80m	17-Aug-15	4.371	147.6	10.58	7.65	0.12	
QUL-40a-0m	17-Sep-15	14.271	91.8	9.76	7.62	0.13	10.45
QUL-40a-40m	17-Sep-15	5.183	202.4	10.99	7.45	0	
QUL-40a-80m	17-Sep-15	4.41	202.3	10.94	7.46	0	
QUL-55-0m	6-Jul-15	17.837	117.8	9.21	7.83	0.35	8.5
QUL-55-15m	6-Jul-15	7.206	118.2	10.35	7.68	0.41	
QUL-55-30m	6-Jul-15	4.721	121.4	10.4	7.52	0.41	
QUL-55-0m	14-Jul-15	20.147	125.4	8.7	7.78	1.12	8.5
QUL-55-15m	14-Jul-15	11.954	126.4	10.08	7.86	1.36	
QUL-55-30m	14-Jul-15	5.197	132.6	10.87	7.58	1.26	
QUL-55-0m	15-Jul-15	20.532	122.6	8.86	8	0.24	7
QUL-55-15m	15-Jul-15	9.391	133.1	10.58	8	0.34	
QUL-55-30m	15-Jul-15	4.794	131.3	11.03	7.7	0.41	
QUL-55-0m	22-Jul-15	19.119	104.1	9.69	7.69	0.58	6.5
QUL-55-15m	22-Jul-15	8.031	138.1	9.76	7.91	0.54	
QUL-55-30m	22-Jul-15	5.632	119.8	10.17	8.09	0.27	
QUL-55a-0m	28-Jul-15	19.189	100.2	8.4	7.9	0.2	7.5
QUL-55a-5m	28-Jul-15	18.4	107.9	8.35	7.81	0.96	
QUL-55a-11m	28-Jul-15	12.481	101	9.62	7.74	0.3	
QUL-55a-0m	4-Aug-15	18.908	110.8	8.27	7.73	1.69	2.5
QUL-55a-5m	4-Aug-15	18.587	107.3	8.36	7.79	0.7	
QUL-55a-11m	4-Aug-15	9.504	109.8	9.95	7.54	1.15	
QUL-55a-0m	10-Aug-15	18.894	134.8	8.78	8.42	0.05	9.95
QUL-55a-5m	10-Aug-15	18.467	134.7	8.8	8.46	0.07	
QUL-55a-11m	10-Aug-15	18.361	134.9	8.74	8.46	0.17	
QUL-55a-0m	17-Aug-15	17.842	141.9	9.02	8.08	0.09	9.75
QUL-55a-5m	17-Aug-15	17.668	142	9.03	8.06	0	
QUL-55a-11m	17-Aug-15	12.834	143.1	10.12	8.02	0.1	
QUL-55a-0m	25-Aug-15	16.403	143.7	8.88	7.94	0.05	9
QUL-55a-5m	26-Aug-15	17.039	145.3	9.17	7.98	0.09	
QUL-55a-11m	26-Aug-15	16.173	153.2	8.97	7.84	0.51	
QUL-55a-0m	31-Aug-15	16.441	142.1	9.14	7.94	0.92	8.75
QUL-55a-5m	31-Aug-15	16.442	141.9	9.12	7.95	0.91	
QUL-55a-11m	31-Aug-15	16.425	141.8	9.09	7.96	0.91	
QUL-55a-0m	3-Sep-15	15.716	208.5	9.23	7.63	0.59	8.5
QUL-55a-5m	3-Sep-15	15.765	207.4	9.17	7.78	0.59	
QUL-55a-11m	3-Sep-15	15.746	207.1	9.12	7.85	0.61	
QUL-55a-0m	8-Sep-15	15.387	139.2	9.22	8.12	0.71	10.75
QUL-55a-5m	8-Sep-15	15.374	139.1	9.19	8.11	0.74	
QUL-55a-11m	8-Sep-15	15.286	141.3	9.11	8.07	0.82	
QUL-55a-0m	14-Sep-15	15.268	181.3	9.19	8.05	0.76	8.5
QUL-55a-5m	14-Sep-15	14.59	180.9	9.16	7.95	0.53	
QUL-55a-11m	14-Sep-15	6.98	183.7	10.51	7.74	0.65	
Quesnel Lake							

Appendix 2
In-situ Data

Site Name	Date	Temp °C	Cond µS/cm	ODO mg/L	pH	Turbidity FNU	Secchi Depth (m)
QUL-55a-0m	22-Sep-15	13.568	176.2	9.28	7.92	-0.04	9
QUL-55a-5m	22-Sep-15	13.388	176.3	9.25	7.92	0	
QUL-55a-11m	22-Sep-15	13.357	176.4	9.19	7.91	0.01	
QUL-55a-0m	28-Sep-15	12.946	145.8	9.73	7.87	0.16	8.75
QUL-55a-5m	28-Sep-15	12.846	145.8	9.68	7.88	0.14	
QUL-55a-11m	28-Sep-15	12.836	145.7	9.61	7.87	0.2	
QUL-56a-0m	28-Jul-15	19.453	101	8.36	7.91	0.24	6.05
QUL-56a-5m	28-Jul-15	18.669	103.2	8.41	7.92	1.7	
QUL-56a-10m	28-Jul-15	17.407	123.1	8.23	7.73	1.81	
QUL-120a-0m	22-Jul-15	18.718	106	9.4	7.25	0.46	10
QUL-120a-40m	22-Jul-15	4.874	117.4	10.64	7.57	0.35	
QUL-120a-80m	27-Jul-15	4.1	114.9	10.79	7.53	0.31	
QUL-120a-120m	22-Jul-15	3.863	115.1	10.86	7.5	0.31	
QUL-120a-190m	27-Jul-15	3.645	116.9	10.67	7.29	0.29	
QUL-120a-0m	12-Aug-15	19.072	142.2	8.71	8.14	1.04	10.5
QUL-120a-40m	12-Aug-15	4.504	147.4	10.61	7.8	0.69	
QUL-120a-80m	12-Aug-15	3.889	147.1	10.65	7.67	0.68	
QUL-120a-0m	14-Sep-15	11.935	73.6	9.69	7.83	58	11
QUL-120a-40m	14-Sep-15	4.565	184	10.43	7.75	0.51	
QUL-120a-80m	14-Sep-15	3.781	183.5	10.59	7.6	0.45	
Quesnel River							
QUR-1	13-Jul-15	19.1	104.8	-	7.711	0.52	
QUR-1	27-Jul-15	17.298	133.4	8.73	7.99	0.4	
QUR-1	10-Aug-15	19.161	104.3	8.24	7.88	0.05	
QUR-1	24-Aug-15	16.398	88.4	8.6	7.8	0.92	
QUR-1	8-Sep-15	15.774	103.1	8.7	7.92	0	
QUR-1	21-Sep-15	13.925	106.3	8.95	9.28	0	
Polley Lake							
P1-S	7-Jul-15	20.995	298.8	9.06	8.7	0.66	4.5
P1-5M	7-Jul-15	19.488	286.2	10.03	8.75	0.78	
P1-10M	7-Jul-15	9.678	305.7	7.67	8.07	1.02	
P1-15M	7-Jul-15	6.435	295.1	7.18	7.73	0.55	
P1-20M	7-Jul-15	5.829	296.9	6.17	7.53	0.5	
P1-B	7-Jul-15	5.78	297	4.6	7.33	0.58	
P2-S	7-Jul-15	22.317	294	9	8.75	1.01	3.5
P2-5M	7-Jul-15	18.086	307.7	9.16	8.79	1.22	
P2-10M	7-Jul-15	9.102	301.3	7.56	8.17	0.77	
P2-15M	7-Jul-15	6.333	297.3	7.18	7.82	0.54	
P2-20M	7-Jul-15	5.853	297.1	6	7.61	0.54	
P2-B	7-Jul-15	5.788	297.5	4.52	7.42	0.52	
P1-S	11-Aug-15	19.772	318.8	8.25	8.49	0.97	5.95
P1-5M	11-Aug-15	18.733	317.8	8.16	8.46	1.03	
P1-10M	11-Aug-15	9.07	323.9	4.54	7.75	1.5	
P1-15M	11-Aug-15	6.19	321.1	5.28	7.56	1.77	
P1-20M	11-Aug-15	5.735	323.2	3.66	7.4	1.72	
P1-B	11-Aug-15	5.744	323.3	3.27	7.31	1.72	
P2-S	11-Aug-15	19.051	316.7	8.19	8.38	0.51	5.5
P2-5M	11-Aug-15	18.694	316.4	8.12	8.36	0.62	
P2-10M	11-Aug-15	9.613	329.1	4.34	7.68	0.89	
P2-15M	11-Aug-15	6.15	321.6	5.41	7.43	1.59	
P2-20M	11-Aug-15	5.741	322.1	3.44	7.28	1.61	
P2-B	11-Aug-15	5.724	322.6	3.02	7.2	1.58	
P1-S	25-Aug-15	17.993	324.9	7.91	8.46	0.28	5.5
P1-S	10-Sep-15	14.535	389.3	8.68	8.17	0.49	7.25
P1-5M	10-Sep-15	14.416	389.5	8.62	8.17	0.5	
P1-10M	10-Sep-15	11.017	410.1	5.86	8.02	0.69	
P1-15M	10-Sep-15	6.219	393.5	3.95	7.44	1.06	
P1-20M	10-Sep-15	5.752	396	2.13	7.25	1.53	
P1-B	10-Sep-15	5.763	396.9	1.66	7.17	2.34	
P2-S	10-Sep-15	14.684	390.4	8.63	8.21	0.65	5.75
P2-5M	10-Sep-15	14.346	390.1	8.57	8.2	0.59	
P2-10M	10-Sep-15	13.251	394	6.42	8.09	0.71	
P2-15M	10-Sep-15	6.574	393.7	4.28	7.5	1.26	
P2-20M	10-Sep-15	5.773	395.9	2.22	7.31	1.51	
P2-B	10-Sep-15	5.774	396	2.07	7.26	1.6	

Appendix 3

Appendix 3
Hydrology Monitoring Results

Sample Point	Date	Staff Gauge (m)	Q (m^3/s)
LOWER EDNEY			
Lower Edney	6-Jul-15	0.016	0.0165
Lower Edney	15-Jul-15	0.026	0.2030
Lower Edney	21-Jul-15		0.0054
LOWER HAZELTINE			
Lower Hazeltine	6-Jul-15	0.211	0.0418
Lower Hazeltine	15-Jul-15	0.390	0.2569
Lower Hazeltine	21-Jul-15		0.1206
Lower Hazeltine	21-Jul-15		0.0801
Lower Hazeltine	30-Jul-15	0.414	0.1783
Lower Hazeltine	9-Aug-15		0.1003
Lower Hazeltine	30-Aug-15		0.0312
Lower Hazeltine	6-Sep-15	0.272	0.0289
UPPER HAZELTINE			
Upper Hazeltine	9-Jul-15	0.461	0.3100
Upper Hazeltine	15-Jul-15	0.446	0.2497
Upper Hazeltine	23-Jul-15	0.442	
Upper Hazeltine	30-Aug-15		0.0220
Upper Hazeltine	6-Sep-15	0.280	0.0215
Upper Hazeltine	8-Sep-15	0.288	
POLLEY LAKE WEIR			
Polley Lake Weir	1-Jul-15		0.1152
Polley Lake Weir	15-Jul-15		0.2393
Polley Lake Weir	23-Jul-15	1.034	0.1945
Polley Lake Weir	30-Jul-15	0.980	0.1666
Polley Lake Weir	30-Aug-15		0.0148