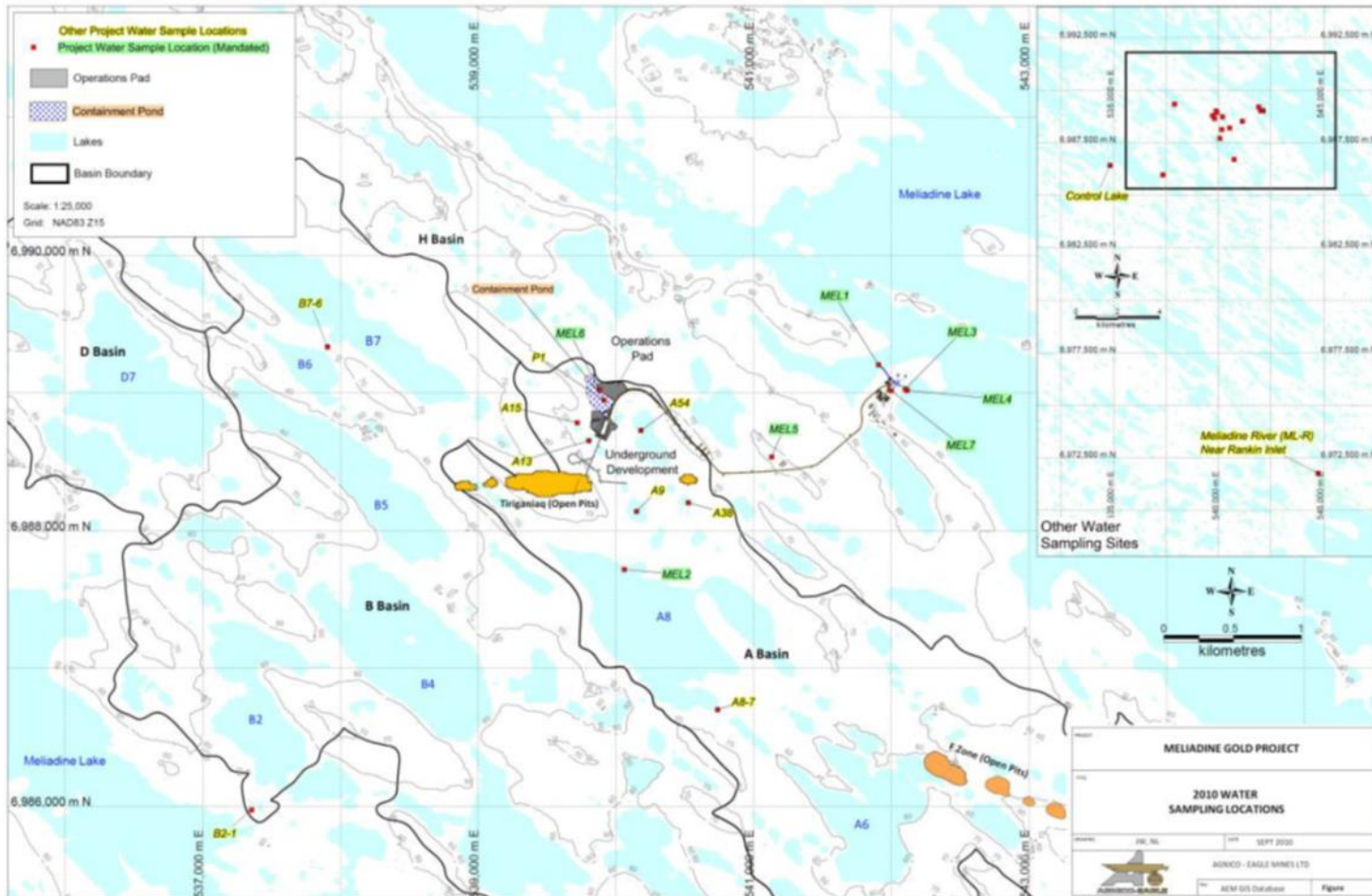


Appendix A

*Figure 1, water sampling locations
and
Water quality data tables*



Waterbody	Units	A7-8			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		0540181, 6987142	540748 -6986690	540748 -6986690	540748 -6986691
LAB		ALS LAB		ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	11.4	18.3	13.9	3.8
pH	pH units	7.55	8	8.27	7.7
Conductivity	(µS/cm)	130	170	170	170
Laboratory-Measured					
Ion balance	%	91.6	98.3	99.4	101
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.016	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0054	0.0046	0.0051	<0.010
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	<0.0010
Total Kjeldahl Nitrogen	mg/L	0.2	0.43	0.21	<0.20
Total Suspended Solids	mg/L	<5.0	<5.0	<5.0	5
Alkalinity, Total (as CaCO3)	mg/L	33	33	34	37
Bicarbonate (HCO3)	mg/L	40	41	42	45
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	20.6	24.4	25.7	27.1
Magnesium (Mg)-Dissolved	mg/L	2.64	2.98	3.32	3.55
Potassium (K)-Dissolved	mg/L	1.18	1.39	1.44	1.63
Sodium (Na)-Dissolved	mg/L	4.06	4.82	5.05	5.4
Chloride	mg/L	30.1	34.5	36.9	37.4
Conductivity	umhos/cm	171	190	205	218
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	62.3	74.5	79.8	79.6
Nitrate-N	mg/L	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	3.84	4.47	4.48	4.94
TDS (Calculated)	mg/L	111	123	133	142
Aluminum (Al)-Total	mg/L	0.0093	0.0054	<0.0050	0.0051
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00105	0.00175	0.00199	0.00142
Barium (Ba)-Total	mg/L	0.0219	0.0197	0.0205	0.0191
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	21.5	24.8	26.3	26
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00056	0.00089	0.00084	0.00078
Iron (Fe)-Total	mg/L	<0.10	<0.10	0.11	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	0.007	0.0076	0.0081	0.0089
Magnesium (Mg)-Total	mg/L	2.93	3.09	3.43	3.57
Manganese (Mn)-Total	mg/L	0.031	0.0071	0.0118	0.00425
Molybdenum (Mo)-Total	mg/L	<0.00020	0.00024	0.00028	0.00026
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	1.14	1.4	1.52	1.46
Rubidium (Rb)-Total	mg/L	0.00131	0.00155	0.0017	0.00168
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.446	0.273	0.417	0.327
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.51	4.95	5.46	5.43
Strontium (Sr)-Total	mg/L	0.15	0.169	0.181	0.171
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L	0.00016	0.00024	0.00012	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Ortho-Phosphate (PO4-P)	mg/L	0.22	-	-	0.26
Sodium Adsorption Ratio		-	0.25	0.25	-
Turbidity	NTU	0.86	0.64	0.79	0.46
pH	pH units	7.52	7.87	7.79	7.76

Waterbody	Units	A8			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		0540181, 6987142	540748 -6986690	540748 -6986690	540748 -6986691
LAB		ALS LAB		ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	11.4	18.3	13.9	3.8
pH	pH units	7.55	8	8.27	7.7
Conductivity	(mS/cm)	130	170	170	170
Laboratory-Measured					
Ion balance	%	91.6	98.3	99.4	101
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.016	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0054	0.0046	0.0051	<0.010
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	<0.0010
Total Kjeldahl Nitrogen	mg/L	0.2	0.43	0.21	<0.20
Total Suspended Solids	mg/L	<5.0	<5.0	<5.0	5
Alkalinity, Total (as CaCO3)	mg/L	33	33	34	37
Bicarbonate (HCO3)	mg/L	40	41	42	45
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	20.6	24.4	25.7	27.1
Magnesium (Mg)-Dissolved	mg/L	2.64	2.98	3.32	3.55
Potassium (K)-Dissolved	mg/L	1.18	1.39	1.44	1.63
Sodium (Na)-Dissolved	mg/L	4.06	4.82	5.05	5.4
Chloride	mg/L	30.1	34.5	36.9	37.4
Conductivity	umhos/cm	171	190	205	218
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	62.3	74.5	79.8	79.6
Nitrate-N	mg/L	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	3.84	4.47	4.48	4.94
TDS (Calculated)	mg/L	111	123	133	142
Aluminum (Al)-Total	mg/L	0.0093	0.0054	<0.0050	0.0051
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00105	0.00175	0.00199	0.00142
Barium (Ba)-Total	mg/L	0.0219	0.0197	0.0205	0.0191
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	21.5	24.8	26.3	26
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00056	0.00089	0.00084	0.00078
Iron (Fe)-Total	mg/L	<0.10	<0.10	0.11	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	0.007	0.0076	0.0081	0.0089
Magnesium (Mg)-Total	mg/L	2.93	3.09	3.43	3.57
Manganese (Mn)-Total	mg/L	0.031	0.0071	0.0118	0.00425
Molybdenum (Mo)-Total	mg/L	<0.00020	0.00024	0.00028	0.00026
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	1.14	1.4	1.52	1.46
Rubidium (Rb)-Total	mg/L	0.00131	0.00155	0.0017	0.00168
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.446	0.273	0.417	0.327
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.51	4.95	5.46	5.43
Strontium (Sr)-Total	mg/L	0.15	0.169	0.181	0.171
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L	0.00016	0.00024	0.00012	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.22	0.25	0.25	0.26
Ortho-Phosphate (PO4-P)	mg/L	-	0.25	0.25	-
Turbidity	NTU	0.86	0.64	0.79	0.46
pH	pH units	7.52	7.87	7.79	7.76

Waterbody	Units	A9			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		540194-6988142	540194-6988142	540194-6988142	540194-6988143
LAB		ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	13.4	19.3	13.06	2.7
pH	pH units	7.54	7.88	8.16	7.7
Conductivity	(µS/cm)	410	1080	2080	1750
Laboratory-Measured					
Ion balance	%	99.8	98.6	103	97.9
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.067	0.012	0.022
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0079	0.018	0.029	0.016
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	<0.0010
Total Kjeldahl Nitrogen	mg/L	0.57	1.11	2.26	1.21
Total Suspended Solids	mg/L	<5.0	<5.0	11	5
Alkalinity, Total (as CaCO3)	mg/L	45	56	74	74
Bicarbonate (HCO3)	mg/L	55	68	91	90
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	79.1	146	297	256
Magnesium (Mg)-Dissolved	mg/L	8.81	19.1	37.8	35.3
Potassium (K)-Dissolved	mg/L	3.01	5.9	10.6	9.45
Sodium (Na)-Dissolved	mg/L	12.4	25.5	53.9	44.2
Chloride	mg/L	139	291	603	528
Conductivity	umhos/cm	598	1100	2110	1900
Fluoride	mg/L	<0.10	<0.10	<0.50	<0.50
Hardness (as CaCO3)	mg/L	230	454	875	740
Nitrate-N	mg/L	<0.050	<0.050	<0.25	<0.25
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.35	<0.35
Nitrite-N	mg/L	<0.050	<0.050	<0.25	<0.25
Sulfate	mg/L	23	45.1	65.4	89.7
TDS (Calculated)	mg/L	389	715	1370	1230
Aluminum (Al)-Total	mg/L	0.0068	0.0065	0.0359	0.0126
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00247	0.00447	0.00981	0.00636
Barium (Ba)-Total	mg/L	0.0721	0.148	0.26	0.23
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	0.000045	<0.000010
Calcium (Ca)-Total	mg/L	78	149	288	221
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	0.00027	0.00028
Copper (Cu)-Total	mg/L	0.00137	0.00251	0.00318	0.00223
Iron (Fe)-Total	mg/L	0.23	0.22	0.21	0.34
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	0.000118	<0.000090
Lithium (Li)-Total	mg/L	0.028	0.0535	0.104	0.083
Magnesium (Mg)-Total	mg/L	9.52	19.9	37.7	45.6
Manganese (Mn)-Total	mg/L	0.00869	0.00995	0.0187	0.0174
Molybdenum (Mo)-Total	mg/L	0.00027	0.00049	0.00069	0.00068
Nickel (Ni)-Total	mg/L	0.0025	0.0052	0.0086	0.0094
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	3.18	6.11	11.2	11.2
Rubidium (Rb)-Total	mg/L	0.00257	0.00529	0.00985	0.00783
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	0.0016
Silicon (Si)-Total	mg/L	0.492	0.681	2.23	1.4
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	12.7	26.3	52.7	48.3
Strontium (Sr)-Total	mg/L	0.57	1.15	2.25	1.94
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.0007	0.00154	0.0037	0.00324
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	0.00017	0.00035	0.0004
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	0.00022	0.00032
Zinc (Zn)-Total	mg/L	0.0024	<0.0020	0.0025	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.35	0.54	0.78	0.77
Ortho-Phosphate (PO4-P)	mg/L	-	-	-	-
Turbidity	NTU	1.18	1.71	3.16	1.93
pH	pH units	7.94	8.07	8.03	7.97

Waterbody	Units	B2-1	
Year		2013	
Date Sampled		23/06/2012	22/07/2013
GPS Coordinates		544790-6971714	544790-6971714
LAB		ALS LAB	ALS LAB
Field Measurments			
Water Temperature	oC	11.1	16.3
pH	pH units	7.83	7.96
Conductivity	(µS/cm)	46	60
Laboratory-Measured			
Ion balance	%	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.043
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0065	0.012
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010
Total Kjeldahl Nitrogen	mg/L	<0.20	0.25
Total Suspended Solids	mg/L	5	<5.0
Alkalinity, Total (as CaCO3)	mg/L	22	24
Bicarbonate (HCO3)	mg/L	27	29
Carbonate (CO3)	mg/L	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	7.76	9.55
Magnesium (Mg)-Dissolved	mg/L	0.926	1.1
Potassium (K)-Dissolved	mg/L	0.612	0.743
Sodium (Na)-Dissolved	mg/L	1.77	2.97
Chloride	mg/L	6.37	8.72
Conductivity	umhos/cm	62	80
Fluoride	mg/L	<0.10	<0.10
Hardness (as CaCO3)	mg/L	23.4	29.3
Nitrate-N	mg/L	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050
Sulfate	mg/L	1.71	3.05
TDS (Calculated)	mg/L	40	52
Aluminum (Al)-Total	mg/L	0.0076	0.0097
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00056	0.00127
Barium (Ba)-Total	mg/L	0.00847	0.0102
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.000025	<0.000010
Calcium (Ca)-Total	mg/L	7.8	9.77
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00065	0.00108
Iron (Fe)-Total	mg/L	<0.10	0.19
Lead (Pb)-Total	mg/L	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	0.95	1.2
Manganese (Mn)-Total	mg/L	0.00681	0.0345
Molybdenum (Mo)-Total	mg/L	<0.00020	0.00026
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10
Potassium (K)-Total	mg/L	0.68	0.774
Rubidium (Rb)-Total	mg/L	0.00069	0.00086
Selenium (Se)-Total	mg/L	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.34	0.276
Silver (Ag)-Total	mg/L	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	1.84	3.2
Strontium (Sr)-Total	mg/L	0.0387	0.0488
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00051	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040
Sodium Adsorption Ratio		0.17	0.26
Ortho-Phosphate (O-PO4)	mg/L	-	-
Turbidity	NTU	1.72	1.22
pH	pH units	7.35	7.59

Waterbody	Units	A13			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		539828-6988676	539828-6988676	539828-6988676	539828-6988677
LAB		ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	8.2	17.3	8.05	2.9
pH	pH units	7.55	8.15	8.05	7.7
Conductivity	(µS/cm)	480	2198	4530	1520
Laboratory-Measured					
Ion balance	%	102	93.9	97.5	101
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.017	0.143	0.024
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0057	0.014	0.025	0.012
Phosphorus (P)-Total Reactive	mg/L	<0.0010	0.012	0.014	<0.0010
Total Kjeldahl Nitrogen	mg/L	0.54	2.36	3.06	0.9
Total Suspended Solids	mg/L	<5.0	8	24	9
Alkalinity, Total (as CaCO3)	mg/L	34	59	76	74
Bicarbonate (HCO3)	mg/L	41	72	93	90
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	61.7	288	657	230
Magnesium (Mg)-Dissolved	mg/L	6.35	22	70.2	27.9
Potassium (K)-Dissolved	mg/L	2.07	12.3	27.2	8.41
Sodium (Na)-Dissolved	mg/L	10.4	63.5	127	41.1
Chloride	mg/L	108	657	1520	481
Conductivity	umhos/cm	464	2060	4780	1710
Fluoride	mg/L	<0.10	<0.50	<0.50	<0.50
Hardness (as CaCO3)	mg/L	170	825	2050	656
Nitrate-N	mg/L	<0.050	<0.25	<0.25	<0.25
Nitrate and Nitrite as N	mg/L	<0.071	<0.35	<0.35	<0.35
Nitrite-N	mg/L	<0.050	<0.25	<0.25	<0.25
Sulfate	mg/L	14.4	38	73.6	28.4
TDS (Calculated)	mg/L	302	1340	3110	1110
Aluminum (Al)-Total	mg/L	0.0215	0.0359	0.0152	0.0298
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00187	0.00762	0.0207	0.00429
Barium (Ba)-Total	mg/L	0.0532	0.28	0.589	0.212
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	0.01	0.019	0.014	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	0.000027	0.000043	0.000015
Calcium (Ca)-Total	mg/L	58	294	705	202
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	0.00035	0.00212	0.00021
Copper (Cu)-Total	mg/L	0.0016	0.00303	0.00368	0.00214
Iron (Fe)-Total	mg/L	0.24	1.77	4.19	0.47
Lead (Pb)-Total	mg/L	<0.000090	0.000217	0.000259	0.000125
Lithium (Li)-Total	mg/L	0.0208	0.17	0.345	0.0795
Magnesium (Mg)-Total	mg/L	6.79	25	58	37
Manganese (Mn)-Total	mg/L	0.0174	0.0234	0.936	0.0407
Molybdenum (Mo)-Total	mg/L	0.00035	0.00396	0.00306	0.00081
Nickel (Ni)-Total	mg/L	0.0021	0.0075	0.0154	0.0067
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	2.13	13.4	26.1	10.1
Rubidium (Rb)-Total	mg/L	0.00195	0.0153	0.0289	0.00724
Selenium (Se)-Total	mg/L	<0.0010	0.0028	<0.0010	0.0021
Silicon (Si)-Total	mg/L	0.438	1.63	5.2	1.06
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	11.3	65	146	46
Strontium (Sr)-Total	mg/L	0.438	2.79	6	1.76
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00088	0.00216	0.00296	0.0019
Tungsten (W)-Total	mg/L	0.00017	0.00075	0.00017	0.00014
Uranium (U)-Total	mg/L	<0.00010	0.00024	0.0006	0.00039
Vanadium (V)-Total	mg/L	<0.00020	0.00025	0.00025	0.00034
Zinc (Zn)-Total	mg/L	<0.0020	0.0136	0.0035	0.0068
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Turbidity	NTU	1.38	10.8	29.1	3.09
pH	pH units	7.75	7.97	7.92	7.99
Ortho-Phosphate (PO4-P)	mg/L	-	-	-	-
Sodium Adsorption Ratio		0.35	0.99	1.45	0.78

Waterbody	Units	A15			
Year		2013			
Date Sampled		23/06/2012	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		539731.8-6988798	539731.8-6988798	No Water in the lake	No Water in the lake
LAB		ALS LAB	ALS LAB		
Field Measurments					
Water Temperature	oC	8.5	18.8		
pH	pH units	7.74	7.96		
Conductivity	(µS/cm)	450	1665		
Laboratory-Measured					
Ion balance	%	97.1	92.6		
Biochemical Oxygen Demand	mg/L	<6.0	<6.0		
Ammonia as N	mg/L	<0.010	0.032		
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020		
Phosphorus (P)-Total	mg/L	0.0071	0.024		
Phosphorus (P)-Total Reactive	mg/L	<0.0010	0.01		
Total Kjeldahl Nitrogen	mg/L	0.44	1.25		
Total Suspended Solids	mg/L	<5.0	8		
Alkalinity, Total (as CaCO3)	mg/L	28	46		
Bicarbonate (HCO3)	mg/L	34	56		
Carbonate (CO3)	mg/L	<12	<12		
Hydroxide (OH)	mg/L	<6.8	<6.8		
Calcium (Ca)-Dissolved	mg/L	61.3	215		
Magnesium (Mg)-Dissolved	mg/L	6.81	17.5		
Potassium (K)-Dissolved	mg/L	2.06	5.23		
Sodium (Na)-Dissolved	mg/L	9.22	24.2		
Chloride	mg/L	123	462		
Conductivity	umhos/cm	490	1540		
Fluoride	mg/L	<0.10	<0.50		
Hardness (as CaCO3)	mg/L	184	636		
Nitrate-N	mg/L	<0.050	<0.25		
Nitrate and Nitrite as N	mg/L	<0.071	<0.35		
Nitrite-N	mg/L	<0.050	<0.25		
Sulfate	mg/L	8.05	23.1		
TDS (Calculated)	mg/L	318	999		
Aluminum (Al)-Total	mg/L	0.0205	0.0348		
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020		
Arsenic (As)-Total	mg/L	0.00207	0.00774		
Barium (Ba)-Total	mg/L	0.0575	0.245		
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020		
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020		
Boron (B)-Total	mg/L	<0.010	<0.010		
Cadmium (Cd)-Total	mg/L	<0.000010	0.000015		
Calcium (Ca)-Total	mg/L	63	223		
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010		
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010		
Cobalt (Co)-Total	mg/L	<0.00020	0.00037		
Copper (Cu)-Total	mg/L	0.00145	0.00265		
Iron (Fe)-Total	mg/L	0.49	0.53		
Lead (Pb)-Total	mg/L	<0.000090	0.00025		
Lithium (Li)-Total	mg/L	0.024	0.0868		
Magnesium (Mg)-Total	mg/L	7.18	19.5		
Manganese (Mn)-Total	mg/L	0.0128	0.0406		
Molybdenum (Mo)-Total	mg/L	0.00041	0.0015		
Nickel (Ni)-Total	mg/L	0.002	0.0092		
Phosphorus (P)-Total	mg/L	<0.10	<0.10		
Potassium (K)-Total	mg/L	2.05	5.51		
Rubidium (Rb)-Total	mg/L	0.00208	0.00637		
Selenium (Se)-Total	mg/L	<0.0010	0.0026		
Silicon (Si)-Total	mg/L	0.358	1.35		
Silver (Ag)-Total	mg/L	<0.00010	<0.00010		
Sodium (Na)-Total	mg/L	9.92	25.8		
Strontium (Sr)-Total	mg/L	0.478	1.74		
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020		
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010		
Thorium (Th)-Total	mg/L	<0.00010	<0.00010		
Tin (Sn)-Total	mg/L	<0.00020	<0.00020		
Titanium (Ti)-Total	mg/L	0.00056	0.00242		
Tungsten (W)-Total	mg/L	0.00017	0.00015		
Uranium (U)-Total	mg/L	<0.00010	0.00041		
Vanadium (V)-Total	mg/L	<0.00020	0.00028		
Zinc (Zn)-Total	mg/L	<0.0020	0.0053		
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040		
Turbidity	NTU	1.48	4.01		
pH	pH units	7.36	7.77		
Ortho-Phosphate (PO4-P)	mg/L	-	-		
Sodium Adsorption Ratio		0.3	0.44		
Total Oil and Grease	mg/L	-	-		

Waterbody	Units	A38			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		540500-6988254	540500-6988254	540500-6988254	540500-6988255
LAB		ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	14.5	18.5	13.3	2.5
pH	pH units	7.73	8.12	8.1	8
Conductivity	(µS/cm)	460	840	1170	1240
Laboratory-Measured					
Ion balance	%	98.3	98.2	103	102
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.078	0.042	0.03
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.01	0.017	0.019	0.013
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	0.012
Total Kjeldahl Nitrogen	mg/L	0.58	0.97	1.44	1.21
Total Suspended Solids	mg/L	<5.0	5	10	5
Alkalinity, Total (as CaCO3)	mg/L	55	72	92	101
Bicarbonate (HCO3)	mg/L	67	88	113	123
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	54	95.4	140	148
Magnesium (Mg)-Dissolved	mg/L	8.02	15.4	23.5	26.8
Potassium (K)-Dissolved	mg/L	4.06	7.21	10.4	11.4
Sodium (Na)-Dissolved	mg/L	19.2	36.4	59	61.6
Chloride	mg/L	98.8	202	306	329
Conductivity	umhos/cm	485	849	1220	1320
Fluoride	mg/L	<0.10	<0.10	<0.50	<0.50
Hardness (as CaCO3)	mg/L	176	302	435	449
Nitrate-N	mg/L	<0.050	<0.050	<0.25	<0.25
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.35	<0.35
Nitrite-N	mg/L	<0.050	<0.050	<0.25	<0.25
Sulfate	mg/L	23.2	38.6	42.3	48.4
TDS (Calculated)	mg/L	315	552	793	861
Aluminum (Al)-Total	mg/L	0.0112	0.0138	0.0168	0.0097
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00219	0.00449	0.00603	0.00619
Barium (Ba)-Total	mg/L	0.0382	0.0756	0.103	0.101
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	0.000012	<0.000010
Calcium (Ca)-Total	mg/L	56	97	136	127
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	0.00027
Copper (Cu)-Total	mg/L	0.00097	0.0018	0.0021	0.00163
Iron (Fe)-Total	mg/L	0.13	0.27	0.18	0.33
Lead (Pb)-Total	mg/L	0.000148	<0.000090	<0.000090	0.000091
Lithium (Li)-Total	mg/L	0.016	0.0272	0.0413	0.0422
Magnesium (Mg)-Total	mg/L	8.7	16	24.7	31.9
Manganese (Mn)-Total	mg/L	0.00637	0.0113	0.018	0.0254
Molybdenum (Mo)-Total	mg/L	0.00037	0.0008	0.001	0.00143
Nickel (Ni)-Total	mg/L	<0.0020	0.0043	0.0053	0.0067
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	3.99	7.28	11.3	12.7
Rubidium (Rb)-Total	mg/L	0.00279	0.005	0.00735	0.00735
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	0.0012
Silicon (Si)-Total	mg/L	0.169	0.465	1.7	1.29
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	21.6	37.8	58.2	61.3
Strontium (Sr)-Total	mg/L	0.465	0.855	1.17	1.27
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00076	0.00129	0.00173	0.00187
Tungsten (W)-Total	mg/L	0.00015	0.0002	0.00014	<0.00010
Uranium (U)-Total	mg/L	0.00017	0.00047	0.00061	0.00091
Vanadium (V)-Total	mg/L	<0.00020	0.00022	0.00023	0.00036
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.63	0.91	1.22	1.26
Ortho-Phosphate (PO4-P)	mg/L	-	-	-	-
Turbidity	NTU	1.01	1.96	3.48	2.06
pH	pH units	7.93	8.11	8.13	8.13

Waterbody	Units	A54			
Year		2013			
Date Sampled		23/06/2012	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		540135-6988794	540135-6988794	540135-6988794	540135-6988795
LAB		ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments					
Water Temperature	oC	17.5	16.7	13.5	4.1
pH	pH units	7.93	8.06	8.07	7.6
Conductivity	(µS/cm)	460	909	1040	910
Laboratory-Measured					
Ion balance	%	101	84.2	102	99.2
Biochemical Oxygen Demand	mg/L	<0.6	<6.0	<6.0	<6.0
Ammonia as N	mg/L	0.022	0.055	0.012	0.022
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0094	0.013	0.0079	0.0053
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	<0.0010
Total Kjeldahl Nitrogen	mg/L	0.62	0.79	0.94	0.73
Total Suspended Solids	mg/L	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	54	53	54	66
Bicarbonate (HCO3)	mg/L	66	65	66	80
Carbonate (CO3)	mg/L	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	58	78.7	107	115
Magnesium (Mg)-Dissolved	mg/L	8.53	13.4	20.7	23.3
Potassium (K)-Dissolved	mg/L	4.34	6.98	10.1	11.4
Sodium (Na)-Dissolved	mg/L	19.5	32.6	55.2	57.4
Chloride	mg/L	99.6	206	260	283
Conductivity	umhos/cm	497	845	1060	1140
Fluoride	mg/L	<0.10	<0.10	<0.50	<0.10
Hardness (as CaCO3)	mg/L	176	270	351	374
Nitrate-N	mg/L	0.496	<0.050	<0.25	<0.050
Nitrate and Nitrite as N	mg/L	0.496	<0.071	<0.35	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.25	<0.050
Sulfate	mg/L	28.6	47.8	51.1	59.5
TDS (Calculated)	mg/L	323	549	688	743
Aluminum (Al)-Total	mg/L	0.0532	<0.0050	<0.0050	0.0051
Antimony (Sb)-Total	mg/L	0.00023	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00367	0.00283	0.00279	0.00273
Barium (Ba)-Total	mg/L	0.0387	0.067	0.0734	0.0724
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	0.013	<0.010	0.01	<0.010
Cadmium (Cd)-Total	mg/L	0.000011	<0.000010	0.000019	<0.000010
Calcium (Ca)-Total	mg/L	56	83.9	106	100
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00149	0.00122	0.00105	0.00092
Iron (Fe)-Total	mg/L	0.16	0.17	<0.10	0.13
Lead (Pb)-Total	mg/L	0.000382	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	0.0157	0.026	0.032	0.0343
Magnesium (Mg)-Total	mg/L	8.68	14.6	22.4	30.3
Manganese (Mn)-Total	mg/L	0.0102	0.00897	0.00889	0.00534
Molybdenum (Mo)-Total	mg/L	0.00052	0.0007	0.00065	0.00068
Nickel (Ni)-Total	mg/L	0.0025	0.0043	0.0034	0.0048
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	4.63	7.32	10.9	13.1
Rubidium (Rb)-Total	mg/L	0.00333	0.00539	0.00693	0.00762
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	0.0012
Silicon (Si)-Total	mg/L	0.256	0.224	0.422	0.334
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	21.6	34.7	53.9	59.3
Strontium (Sr)-Total	mg/L	0.485	0.841	1.02	1.12
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00378	0.00123	0.00108	0.00169
Tungsten (W)-Total	mg/L	0.00039	0.00019	0.00014	<0.00010
Uranium (U)-Total	mg/L	0.00029	0.00033	0.00029	0.00039
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.0024	<0.0020	0.0029	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Turbidity	NTU	2.14	1.24	0.97	0.69
Ortho-Phosphate (PO4-P)	mg/L	-	-	-	-
pH	pH units	8.08	8.02	7.97	7.99
Sodium Adsorption Ratio		0.71	0.92	1.28	1.34

Waterbody	Units	P1			
Year		2013			
Date Sampled		23/06/2013	22/07/2013	21/08/2013	18/09/2013
GPS Coordinates		539901-6988966	539901-6988966	539901-6988966	539901-6988967
Source		ALS	ALS	ALS	ALS
Field Measurments					
Water Temperature	oC	18.2	16.4	15.06	2.5
pH	pH units	8.04	8.53	8.53	8
Conductivity	(µS/cm)	240	380	500	630
Laboratory-Measured					
Ion balance	%	91.3	93.2	104	101
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.03	0.028	0.168
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.02	0.016	0.02	0.019
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	0.013
Total Kjeldahl Nitrogen	mg/L	0.57	0.98	1.78	1.3
Total Suspended Solids	mg/L	<5.0	<5.0	6	6
Alkalinity, Total (as CaCO3)	mg/L	50	102	128	142
Alkalinity Bicarbonate (HCO3)	mg/L	61	124	157	174
Alkalinity Carbonate (CO3)	mg/L	<12	<12	<12	<12
Alkalinity Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	21.7	44.1	68.4	90.1
Magnesium (Mg)-Dissolved	mg/L	3.15	5.8	11.1	12.9
Potassium (K)-Dissolved	mg/L	1.89	3.45	5.85	5.45
Sodium (Na)-Dissolved	mg/L	4.39	9.04	19	22
Chloride	mg/L	13.4	40.3	79.1	94.9
Conductivity	umhos/cm	177	333	533	683
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	72	139	223	290
Nitrate-N	mg/L	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	17.00	10.8	15.2	52.9
TDS (Calculated)	mg/L	115.0	217	346	444
Aluminum (Al)-Total	mg/L	0.0351	0.0103	0.0107	0.0235
Antimony (Sb)-Total	mg/L	0.00022	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.0128	0.00582	0.0102	0.00814
Barium (Ba)-Total	mg/L	0.0161	0.0369	0.0527	0.0625
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.000022	<0.000010	0.00003	0.000015
Calcium (Ca)-Total	mg/L	23	45.4	70.1	100
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	0.00024	<0.00020	<0.00020	0.00029
Copper (Cu)-Total	mg/L	0.00161	0.0022	0.0026	0.00197
Iron (Fe)-Total	mg/L	0.28	0.44	0.41	0.85
Lead (Pb)-Total	mg/L	0.000392	<0.000090	0.000108	0.000156
Lithium (Li)-Total	mg/L	<0.0020	0.0028	0.0052	0.0055
Magnesium (Mg)-Total	mg/L	3.54	6.12	11.6	15.7
Manganese (Mn)-Total	mg/L	0.0214	0.00954	0.0173	0.0248
Molybdenum (Mo)-Total	mg/L	0.00051	0.0007	0.00114	0.00184
Nickel (Ni)-Total	mg/L	0.0021	0.0033	0.0045	0.0051
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	2	3.53	6.14	6.2
Rubidium (Rb)-Total	mg/L	0.00164	0.00291	0.00432	0.00407
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.17	0.277	1.75	1.84
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.87	9.42	20.6	26.9
Strontium (Sr)-Total	mg/L	0.125	0.293	0.495	0.605
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00111	0.00062	0.00115	0.00185
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.0001	0.00031	0.00066	0.00155
Vanadium (V)-Total	mg/L	0.00024	0.00024	0.00039	0.00091
Zinc (Zn)-Total	mg/L	<0.0020	0.0023	0.0025	0.0036
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		2.75	3.55	5.35
Ortho-Phosphate (O-PO4)	mg/L	-	-	-	-
Sodium Adsorption Ratio		0.25	0.35	0.56	0.69
pH	pH units	7.88	8.26	8.28	8.23

Waterbody	Units	B7-6	
Year		2013	
Date Sampled		23/06/2013	22/07/2013
GPS Coordinates		-	
LAB		ALS LAB	ALS LAB
Field Measurments			
Water Temperature	oC	12.4	18.4
pH	pH units	8.13	8.37
Conductivity	(µS/cm)	130	140
Laboratory-Measured			
Ion balance	%	93.1	97.3
Biochemical Oxygen Demand	mg/L	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.023
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0051	0.0054
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010
Total Kjeldahl Nitrogen	mg/L	0.21	0.32
Total Suspended Solids	mg/L	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	16.4	31
Bicarbonate (HCO3)	mg/L	20	38
Carbonate (CO3)	mg/L	<0.60	<12
Hydroxide (OH)	mg/L	<0.34	<6.8
Calcium (Ca)-Dissolved	mg/L	12.3	24.2
Magnesium (Mg)-Dissolved	mg/L	1.25	2.24
Potassium (K)-Dissolved	mg/L	0.765	1.33
Sodium (Na)-Dissolved	mg/L	1.93	3.45
Chloride	mg/L	18.2	32.7
Conductivity	umhos/cm	100	178
Fluoride	mg/L	<0.10	<0.10
Hardness (as CaCO3)	mg/L	37.9	69.7
Nitrate-N	mg/L	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.010
Sulfate	mg/L	1.92	3.66
TDS (Calculated)	mg/L	65	116
Aluminum (Al)-Total	mg/L	0.0062	<0.0050
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00075	0.00135
Barium (Ba)-Total	mg/L	0.0165	0.0204
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.000041	<0.000010
Calcium (Ca)-Total	mg/L	13	24.1
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00055	0.00076
Iron (Fe)-Total	mg/L	0.12	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	0.0054	0.0089
Magnesium (Mg)-Total	mg/L	1.32	2.32
Manganese (Mn)-Total	mg/L	0.0193	0.00465
Molybdenum (Mo)-Total	mg/L	<0.00020	0.00021
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10
Potassium (K)-Total	mg/L	0.831	1.34
Rubidium (Rb)-Total	mg/L	0.00086	0.00148
Selenium (Se)-Total	mg/L	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.319	0.321
Silver (Ag)-Total	mg/L	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	1.91	3.58
Strontium (Sr)-Total	mg/L	0.105	0.189
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040
Sodium Adsorption Ratio		-	0.19
Ortho-Phosphate (O-PO4)	mg/L	-	-
Turbidity	NTU	1.36	0.72
pH	pH units	7.37	7.88

Waterbody	Units	Control lake		
Year		2013		
Date Sampled		23/06/2013	22/07/2013	21/08/2013
GPS Coordinates		535000.8-6986333	535000.8-6986333	535000.8-6986333
LAB		ALS LAB	ALS LAB	ALS LAB
Field Measurments				
Water Temperature	oC	10.5	16	13.3
pH	pH units	7.88	8.3	8.53
Conductivity	(µS/cm)	0.05	69	5
Laboratory-Measured				
Ion balance	%	Low EC	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	<0.010	0.412
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004	0.0062	0.007
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L	<0.20	0.31	450
Total Suspended Solids	mg/L	5	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L	26	23	23
Bicarbonate (HCO3)	mg/L	31	28	28
Carbonate (CO3)	mg/L	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	7.66	7.49	8.04
Magnesium (Mg)-Dissolved	mg/L	0.97	0.841	0.97
Potassium (K)-Dissolved	mg/L	0.863	0.85	0.931
Sodium (Na)-Dissolved	mg/L	3.92	3.63	3.89
Chloride	mg/L	6.98	6.88	7.26
Conductivity	umhos/cm	72	69	75
Fluoride	mg/L	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	23.4	22.5	26.8
Nitrate-N	mg/L	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050
Sulfate	mg/L	1.81	1.83	1.9
TDS (Calculated)	mg/L	47	45	48
Aluminum (Al)-Total	mg/L	0.0064	<0.0050	0.0134
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00042	0.00046	0.00053
Barium (Ba)-Total	mg/L	0.0093	0.00653	0.00693
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	0.000032
Calcium (Ca)-Total	mg/L	7.81	7.51	8.96
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00062	0.00075	0.00118
Iron (Fe)-Total	mg/L	0.11	<0.10	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	0.000092
Lithium (Li)-Total	mg/L	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	0.942	0.904	1.08
Manganese (Mn)-Total	mg/L	0.0153	0.0016	0.00505
Molybdenum (Mo)-Total	mg/L	<0.00020	<0.00020	0.00033
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	0.845	0.866	1
Rubidium (Rb)-Total	mg/L	0.00096	0.001	0.00117
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.175	0.155	0.494
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	3.94	3.85	4.34
Strontium (Sr)-Total	mg/L	0.0257	0.0247	0.029
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020	0.0081
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.35	0.35	0.35
Ortho-Phosphate (PO4-P)	mg/L	-	-	-
Turbidity	NTU	0.61	0.65	0.41
pH	pH units	7.17	7.68	7.57

Waterbody	Units	MEL-R		
Year		2013		
Date Sampled		23/06/2012	22/07/2013	21/08/2013
GPS Coordinates		544778.3-6971712	544778.3-6971712	544778.3-6971712
LAB		ALS LAB	ALS LAB	ALS LAB
Field Measurments				
Water Temperature	oC	10	15.5	12.7
pH	pH units	8.13	8.26	8.05
Conductivity	(µS/cm)	5	5	105
Laboratory-Measured				
Ion balance	%	Low EC	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.008	0.0063	0.0052
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L	<0.20	<0.20	<0.20
Total Suspended Solids	mg/L	5	13	<5.0
Alkalinity, Total (as CaCO3)	mg/L	24	22	23
Bicarbonate (HCO3)	mg/L	29	26	27
Carbonate (CO3)	mg/L	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	7.46	7.49	8.08
Magnesium (Mg)-Dissolved	mg/L	1.09	1.2	1.36
Potassium (K)-Dissolved	mg/L	0.904	0.972	1.08
Sodium (Na)-Dissolved	mg/L	4.07	5.16	5.73
Chloride	mg/L	7.84	10.1	11.4
Conductivity	umhos/cm	77	81	98
Fluoride	mg/L	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	23	26	26.8
Nitrate-N	mg/L	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050
Sulfate	mg/L	3.4	3.28	3.51
TDS (Calculated)	mg/L	50	53	64
Aluminum (Al)-Total	mg/L	0.0663	0.019	0.0096
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00027	0.00025	0.00025
Barium (Ba)-Total	mg/L	0.0111	0.00852	0.00867
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	0.000022	<0.000010
Calcium (Ca)-Total	mg/L	7.45	8.21	8.37
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00092	0.00102	0.0011
Iron (Fe)-Total	mg/L	0.13	<0.10	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	1.07	1.33	1.44
Manganese (Mn)-Total	mg/L	0.00671	0.0031	0.00311
Molybdenum (Mo)-Total	mg/L	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	1.02	1.09	1.12
Rubidium (Rb)-Total	mg/L	0.00151	0.0015	0.00172
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.436	0.262	0.256
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.46	5.68	6.26
Strontium (Sr)-Total	mg/L	0.0352	0.0357	0.0394
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00513	0.00128	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	0.00025	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	0.0038	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.4	0.48	0.49
Ortho-Phosphate (PO4-P)	mg/L	-	-	-
Turbidity	NTU	1.84	0.59	0.56
pH	pH units	7.49	7.54	7.62

Waterbody	Units	MEL-1				
		2013				
Date Sampled		24/06/2012	23/07/2013	29/07/2013	19/08/2013	17/09/2013
GPS Coordinates		541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989174
LAB		ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments						
Water Temperature	oC	6.8	15		11.3	4.5
pH	pH units	8.09	8.4		7.53	7.1
Conductivity	(µS/cm)	20	30		20	120
Laboratory-Measured						
Fecal Coliforms	MPN/100mL	<3	4	9	<3	<3
Total Coliforms	mg/L	<3	9	9	23	<3
E. Coli	mg/L	<3	4	9	<3	<3
Total Oil and Grease	mg/L	<1.0				
Ion balance	%	Low EC	Low EC	Low EC	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	<0.010	0.031	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.005	0.0096	0.01		
Phosphorus (P)-Total Reactive	mg/L	<0.0010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20
Total Suspended Solids	mg/L	<5.0	<5.0	<5.0	11	<5.0
Phosphorus (P)-Total	mg/L	0.005	0.0096	0.01	0.0049	0.0031
Alkalinity, Total (as CaCO3)	mg/L	14.8	16.6	15.8	16.2	16.7
Bicarbonate (HCO3)	mg/L	18	20.3	19.3	19.7	20.4
Carbonate (CO3)	mg/L	<0.60	<0.60	<0.60	<0.60	<0.60
Hydroxide (OH)	mg/L	<0.34	<0.34	<0.34	<0.34	<0.34
Calcium (Ca)-Dissolved	mg/L	5.44	6.23	6.37	6	6.46
Magnesium (Mg)-Dissolved	mg/L	0.859	1.01	1.07	0.842	1.14
Potassium (K)-Dissolved	mg/L	0.643	0.767	0.816	0.764	0.857
Sodium (Na)-Dissolved	mg/L	2.96	3.69	3.97	3.74	4.31
Chloride	mg/L	6.1	7.58	7.25	7.57	8.12
Conductivity	umhos/cm	56	66	64	70	68
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	17.5	20	18.7	21.1	21.6
Nitrate-N	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	2.44	3.15	3.01	3.08	3.7
TDS (Calculated)	mg/L	34	34.3	45	37.8	42.2
Aluminum (Al)-Total	mg/L	0.0086	0.0177	0.0094	0.0051	0.0063
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00036	0.00044	0.0004	0.00041	0.00048
Barium (Ba)-Total	mg/L	0.00635	0.00739	0.00641	0.0064	0.00661
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	5.45	6.29	5.86	6.65	6.71
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	0.00079	0.00105	0.00098	0.0009	0.0009
Iron (Fe)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	0.948	1.05	0.996	1.09	1.16
Manganese (Mn)-Total	mg/L	0.0114	0.00877	0.0051	0.00422	0.00467
Molybdenum (Mo)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	0.669	0.775	0.78	0.832	0.851
Rubidium (Rb)-Total	mg/L	0.00098	0.00121	0.00112	0.00126	0.00128
Selenium (Se)-Total	mg/L	<0.00010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.256	0.345	0.278	0.353	0.281
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	3.21	3.77	3.83	4.37	4.17
Strontium (Sr)-Total	mg/L	0.027	0.0302	0.028	0.0306	0.0311
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.00051	0.00089	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	<0.0020	<0.0020	0.0042	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Ortho-Phosphate (PO4-P)	mg/L	-	-	-	-	-
Turbidity	NTU	0.66	0.68	0.53	1.73	1.05
pH	pH units	7.25	7.44	7.39	7.52	7.38

Waterbody	Units	2013 as Mel 3a / considering MEL-3 inexistant				
Year				2013		
Date Sampled		24/06/2013	23/07/2013	29/07/2013	19/08/2013	17/09/2013
GPS Coordinates		-	-	-	-	-
LAB		ALS Winnipeg	ALS Winnipeg	ALS Winnipeg	ALS Winnipeg	ALS Winnipeg
Field Measurments						
Water Temperature	oC	19.8			18.2	16.5
pH	pH units	7.53			6.93	7.1
Conductivity	(µS/cm)	820			410	650
Laboratory-Measured						
Fecal Coliforms	MPN/100mL	-	38	9	23	46000
Total Coliforms	mg/L	-	2300	2300	1500	110000
E. Coli	mg/L	-	<3	<3	9	43
Total Oil and Grease	mg/L	-	-	-	-	-
Ion balance	%	108	104	115	105	111
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0	7.3
Ammonia as N	mg/L	39.8	17.8	13.2	1.05	6.1
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	16.9	13.5	13.9	10.9	9.55
Phosphorus (P)-Total Reactive	mg/L	16.6	13.8	13.7	10.6	8.7
Total Kjeldahl Nitrogen	mg/L	40	21.4	17.1	3.24	8.8
Total Suspended Solids	mg/L	7	7	5	5	9
Alkalinity, Total (as CaCO3)	mg/L	118	166	106	28	64
Bicarbonate (HCO3)	mg/L	144	203	129	35	78
Carbonate (CO3)	mg/L	<12	<12	<12	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	17.8	13.4	14.4	15.4	13.7
Magnesium (Mg)-Dissolved	mg/L	4.84	3.8	4.23	3.11	3.33
Potassium (K)-Dissolved	mg/L	37.6	32.5	35	24	24.2
Sodium (Na)-Dissolved	mg/L	58.6	78.8	66.3	45.6	46.3
Chloride	mg/L	73.9	62.7	59.7	51.3	52.6
Conductivity	umhos/cm	856	708	605	456	457
Fluoride	mg/L	0.15	0.11	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	64.4	50.4	47.9	54.2	49.3
Nitrate-N	mg/L	20.9	6.44	8.03	13.8	7.99
Nitrate and Nitrite as N	mg/L	26.5	8.99	10.5	14	8.24
Nitrite-N	mg/L	5.6	2.56	2.43	0.196	0.246
Sulfate	mg/L	34.7	26.2	23.6	24.5	27.5
TDS (Calculated)	mg/L	416	351	340	272	256
Aluminum (Al)-Total	mg/L	0.0519	0.129	0.0909	0.0552	0.0599
Antimony (Sb)-Total	mg/L	<0.00020	0.00052	0.00038	0.0003	0.00034
Arsenic (As)-Total	mg/L	0.00133	0.00139	0.00151	0.00118	0.00174
Barium (Ba)-Total	mg/L	0.00452	0.00363	0.00376	0.00914	0.00672
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00023
Boron (B)-Total	mg/L	0.062	0.037	0.154	0.101	0.183
Cadmium (Cd)-Total	mg/L	0.000022	0.000019	0.000025	0.000017	0.000021
Calcium (Ca)-Total	mg/L	17.6	13.7	12.9	15.9	14.2
Cesium (Cs)-Total	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	0.00026	0.0003	0.00044	0.00038	0.0005
Copper (Cu)-Total	mg/L	0.0098	0.0073	0.00672	0.00847	0.00849
Iron (Fe)-Total	mg/L	0.12	0.17	0.14	<0.10	0.18
Lead (Pb)-Total	mg/L	0.00156	0.00186	0.00239	0.000776	0.000884
Lithium (Li)-Total	mg/L	0.0021	0.0029	0.003	0.0027	<0.0020
Magnesium (Mg)-Total	mg/L	4.54	3.96	3.78	3.51	3.38
Manganese (Mn)-Total	mg/L	0.0396	0.0168	0.0194	0.0231	0.0194
Molybdenum (Mo)-Total	mg/L	0.0004	0.00043	0.00045	0.00032	0.00062
Nickel (Ni)-Total	mg/L	0.0023	0.0039	0.0043	0.0048	0.004
Phosphorus (P)-Total	mg/L	17.4	13.8	13.2	10.6	9.75
Potassium (K)-Total	mg/L	38.2	33.1	34	24.8	24.1
Rubidium (Rb)-Total	mg/L	0.0342	0.0297	0.0295	0.0224	0.0208
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.79	1.16	1.25	1.13	0.728
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	265	78.5	63.6	50.9	43.2
Strontium (Sr)-Total	mg/L	0.0634	0.0551	0.0571	0.0607	0.0488
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00221	0.00157	0.00131	0.00051	0.00059
Titanium (Ti)-Total	mg/L	0.00166	0.00155	0.00134	0.00085	0.0047
Tungsten (W)-Total	mg/L	<0.00010	0.00023	0.00015	0.0001	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.0439	0.0196	0.028	0.0733	0.0425
Zirconium (Zr)-Total	mg/L	<0.00040	0.00066	0.00052	<0.00040	0.00065
Ortho-phosphate (PO4-P)	mg/L	-	-	-	-	-
Turbidity	NTU	1.93	2.85	2.52	1.99	4.83
pH	pH units	7.62	7.87	7.48	7.41	7.29

Waterbody	Units	MEL-4				
Year		2013				
Date Sampled		24/06/2013	23/07/2013	29/07/2013	19/08/2013	17/09/2013
GPS Coordinates		542092-6989012	542092-6989012	542092-6989012	542092-6989012	542092-6989013
LAB		ALS	ALS	ALS	ALS	ALS
Field Measurments						
Water Temperature	oC	5.8	15.2		12.1	4.3
pH	pH units	7.81	8.38		7.63	7.4
Conductivity	(µS/cm)	20	30		30	100
Laboratory-Measured						
Fecal Coliforms	MPN/100mL	<3	380	<3	<3	<3
Total Coliforms	mg/L	<3	380	23	93	<3
E. Coli	mg/L	<3	140	<3	<3	<3
Total Oil and Grease	mg/L	<1.0				
Ion balance	%	Low EC	Low EC	Low EC	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	0.012	0.37	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.024	0.33	0.041	0.05	0.0051
Phosphorus (P)-Total Reactive	mg/L	0.004	0.27	<0.010	0.013	<0.010
Total Kjeldahl Nitrogen	mg/L	<0.20	0.72	0.21	0.32	<0.20
Total Suspended Solids	mg/L	<5.0	5	5	-	<5.0
Phosphorus (P)-Total	mg/L	0.024	0.33	0.041	30	-
Alkalinity, Total (as CaCO3)	mg/L	13.9	22	16.5	17.1	16.8
Bicarbonate (HCO3)	mg/L	17	27	20.2	20.9	20.5
Carbonate (CO3)	mg/L	<0.60	<12	<0.60	<0.60	<0.60
Hydroxide (OH)	mg/L	<0.34	<6.8	<0.34	<0.34	<0.34
Calcium (Ca)-Dissolved	mg/L	5.12	6.78	6.56	6.55	6.37
Magnesium (Mg)-Dissolved	mg/L	0.88	1.1	1.09	0.939	1.11
Potassium (K)-Dissolved	mg/L	0.716	1.47	0.843	0.831	0.869
Sodium (Na)-Dissolved	mg/L	3.7	5.54	4.3	4.27	4.27
Chloride	mg/L	6.81	9.14	7.66	8.11	7.96
Conductivity	umhos/cm	59	84	67	74	69
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	16.8	22.2	18.8	22.8	21
Nitrate-N	mg/L	<0.050	0.067	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	2.9	3.63	3.15	3.33	3.28
TDS (Calculated)	mg/L	34	55	43.8	40	43.3
Aluminum (Al)-Total	mg/L	0.0098	0.0188	0.0252	0.134	<0.0050
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.00045	0.00108	0.00064	0.00097	0.0004
Barium (Ba)-Total	mg/L	0.00656	0.00752	0.00634	0.0085	0.00634
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	5.16	6.95	5.93	7.11	6.52
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	0.00021	<0.00020
Copper (Cu)-Total	mg/L	0.00085	0.00112	0.00102	0.00125	0.00082
Iron (Fe)-Total	mg/L	<0.10	<0.10	<0.10	0.3	<0.10
Lead (Pb)-Total	mg/L	<0.000090	0.000137	<0.000090	0.000203	<0.000090
Lithium (Li)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	0.942	1.17	0.964	1.21	1.14
Manganese (Mn)-Total	mg/L	0.0154	0.0141	0.00657	0.0171	0.00322
Molybdenum (Mo)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	0.31	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L	0.726	1.51	0.794	0.876	0.855
Rubidium (Rb)-Total	mg/L	0.00116	0.00183	0.00109	0.00141	0.00128
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.272	0.36	0.285	0.515	0.265
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.09	5.81	3.97	4.67	4.24
Strontium (Sr)-Total	mg/L	0.0243	0.0338	0.0291	0.0339	0.0308
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	0.00064	0.00085	0.00993	<0.00050
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	0.00041	<0.00020
Zinc (Zn)-Total	mg/L	0.0022	<0.0020	0.0022	0.0038	<0.0020
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ortho-Phosphate (O-PO4)	mg/L	-	-	-	-	-
Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Turbidity	NTU	1.19	0.83	1.11	1.03	0.47
pH	pH units	7.29	7.52	7.43	7.58	7.42

Waterbody	Units	MEL-5	
Date Sampled		28/05/2012	20/06/2013
Localisation		Bladder Berm	Bladder Berm
LAB		ALS LAB	ALS LAB
Laboratory-Measured			
Benzene	mg/L	<0.00050	<0.00050
Toluene	mg/L	<0.0010	<0.0010
Ethyl benzene	mg/L	<0.00050	<0.00050
Xylenes	mg/L	<0.0015	<0.0015
Lead (Pb)-Total	mg/L	0.000243	0.000477
Oil and Grease, Total	mg/L	<2.0	<2.0
Phenols (4AAP)	mg/L	0.004	<0.0010

Waterbody	Units	MEL-7	
Year		2013	
Date Sampled		29/07/2013	17/09/2013
GPS Coordinates		542001-6989066	542001-6989066
LAB		ALS	ALS
Field Measurments			
Water Temperature	oC		
pH	pH units		
Conductivity	(µS/cm)		
Laboratory-Measured			
Fecal Coliforms	MPN/100mL	9	4
Total Coliforms	mg/L	43	4300
E. Coli	mg/L	4	<3
Total Oil and Grease	mg/L		
Ion balance	%	116	108
Biochemical Oxygen Demand	mg/L	<6.0	<6.0
Ammonia as N	mg/L	13.8	2.34
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	14.5	2.98
Phosphorus (P)-Total Reactive	mg/L	14.3	2.93
Total Kjeldahl Nitrogen	mg/L	18.9	2.97
Total Suspended Solids	mg/L	10	5
Phosphorus (P)-Total	mg/L	14.5	
Alkalinity, Total (as CaCO3)	mg/L	107	29
Bicarbonate (HCO3)	mg/L	130	36
Carbonate (CO3)	mg/L	<12	<12
Hydroxide (OH)	mg/L	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L	14.7	8.58
Magnesium (Mg)-Dissolved	mg/L	4.28	1.85
Potassium (K)-Dissolved	mg/L	36.4	7.92
Sodium (Na)-Dissolved	mg/L	68.6	17.9
Chloride	mg/L	61.7	20.7
Conductivity	umhos/cm	623	188
Fluoride	mg/L	<0.10	<0.10
Hardness (as CaCO3)	mg/L	50.5	30.4
Nitrate-N	mg/L	8.6	2.71
Nitrate and Nitrite as N	mg/L	11.1	2.71
Nitrite-N	mg/L	2.52	<0.050
Sulfate	mg/L	24.4	11
TDS (Calculated)	mg/L	344	116
Aluminum (Al)-Total	mg/L	0.115	0.0272
Antimony (Sb)-Total	mg/L	0.00039	<0.00020
Arsenic (As)-Total	mg/L	0.00157	0.00086
Barium (Ba)-Total	mg/L	0.00397	0.00548
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020
Boron (B)-Total	mg/L	0.162	0.059
Cadmium (Cd)-Total	mg/L	0.00003	0.000011
Calcium (Ca)-Total	mg/L	13.8	8.95
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	0.00046	0.00023
Copper (Cu)-Total	mg/L	0.00697	0.00917
Iron (Fe)-Total	mg/L	0.16	0.11
Lead (Pb)-Total	mg/L	0.00159	0.000695
Lithium (Li)-Total	mg/L	0.0031	<0.0020
Magnesium (Mg)-Total	mg/L	3.89	1.95
Manganese (Mn)-Total	mg/L	0.0235	0.00983
Molybdenum (Mo)-Total	mg/L	0.00047	0.00029
Nickel (Ni)-Total	mg/L	0.0046	<0.0020
Phosphorus (P)-Total	mg/L	13.7	3.12
Potassium (K)-Total	mg/L	35.4	8.11
Rubidium (Rb)-Total	mg/L	0.0316	0.00746
Selenium (Se)-Total	mg/L	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	1.35	0.433
Silver (Ag)-Total	mg/L	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	66.3	18.2
Strontium (Sr)-Total	mg/L	0.0592	0.035
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00129	0.00022
Titanium (Ti)-Total	mg/L	0.00267	0.00199
Tungsten (W)-Total	mg/L	0.00017	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.0306	0.023
Zirconium (Zr)-Total	mg/L	0.00068	<0.00040
Oil & Grease	mg/L	<1.0	<1.0
Turbidity	NTU	4.23	3.03
pH	pH units	7.46	7.27