

**MELIADINE
GOLD
PROJECT**



2012 Annual Report

Water Licence 2BB-MEL0914

**Prepared for the Nunavut Water Board
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Part B clause 7: The Licensee shall file an annual report on the appurtenant undertaking with the Board no later than March 31st of the year being reported which shall contain, but not limited to, the following information;

- a) monthly and annual quantities in cubic metres of all freshwater obtained from Meliadine lake at monitoring stations MEL-1 and drilling sites;

	Domestic water; Meliadine Lake (m ³ /day)	Water for drilling use average (m ³ /day)	Total m ³ /day)	Total m ³
Jan-12	17.1	0	17.1	229.9
Feb-12	14.5	145.2	159.7	4631.6
Mar-12	19.6	179.2	198.8	6165.6
Apr-12	19.5	229.3	248.8	7464.9
May-12	22.1	196.8	218.9	6764.2
Jun-12	20.7	223	243.7	7312.0
Jul-12	20.6	193.6	214.2	6625.5
Aug-12	17.1	184.8	201.9	6250.1
Sep-12	15.8	102.2	118	2211.7
Oct-12	10.7	0	10.7	310.2
Nov-12	9.4	0	9.4	283.0
Dec-12	4.8	0	4.8	148.4
			TOTAL	48397.1

- b) the monthly and annual quantities in cubic meters of mine water pumped from the underground;

No underground pumping in 2012 at Meliadine site.

- c) an estimate of the current volume of waste rock and ore stockpiled on site;

A stockpile of approximately 33 683 tons of ore is on site.

- d) tabular summaries of all data generated under the monitoring program, part J;

Please see Appendix A for data tables of the 2012 monitoring. The location of sampling stations is shown on figure 1 in appendix A.

- e) a summary of modification and/or major maintenance work carried out on the water supply facilities, Bulk Fuel Storage Facility, Bermed fuel containment facilities and sewage disposal facility, including all associated structures, an outline of any work anticipated for the next year;

➤ *Fuel storage Facility*

- ✓ *New double walled tanks have been installed; 8 with a 100000 L capacity and 4 with a 85000 L capacity.*

This is the fuel storage located at Meliadine.

Location	Number	Size (Liters)	Description
Camp	3	50 000	Steel Enviro Tanks
Tank Farm	11	50 000	Steel Enviro Tanks
Tank Farm	8	100 000	Steel Enviro Tanks
Tank Farm	2	85 000	Steel Enviro Tanks
Camp jet A	3	50 000	Steel Enviro Tanks
Camp jet A	2	85 000	Steel Enviro Tanks

➤ *Sewage disposal facility*

- ✓ *During 2012, Biodisk 1 was levelled, Biodisk 2 was installed with a new EQ tank and all grey water from the kitchen and laundry were hooked to the STP treatment system.*

- f) a list of unauthorized discharges and follow-up action taken;

In the first 6 months of 2012, we had problems with the Sewage Treatment Plan at Meliadine. The main solution to resolve the problematic was to hire two operators for the maintenance and the operation of the STP. We have also hired an external consultant (Nordikeau) to improve the STP and to train the operators. After all these improvements, the limits were respected from July 7th to September 25th.

At the end of September, an electrical problem occurred with the UV system and detracted the system to be efficient at 100%. Replacement parts were ordered. To reduce the risk to relive this situation, a brand new UV system was bought and installed.

- g) updates or revisions to the abandonment and restoration plan, site water management plan, waste rock and ore storage management plan, spill contingency plan and the operations and maintenance manual;

Agnico-Eagle is working to keep updated the management plans for the Meliadine project. Attached in appendix D is the revised spill contingency plan version October 2012.

- h) an updated estimate of the current Meliadine Lake Gold Project restoration liability, as required under Part B, Item 3, based upon the results of the restoration research, project development monitoring, and any modifications to the site plan;

An update will be provided during 2013.

- i) a brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector;

See Appendix B for the complete reports.

In 2012 AANDC's inspectors did inspections of the Meliadine Site. Some situations were judged unacceptable by the inspectors. Here are the Non-compliances of Act or licence noted with the corrective actions taken;

- *A sump was not constructed .*
 - ✓ *The licence 2BB-MEL0914 requires to have a sump designed and stamped by an engineer. Since 2012, the Biodisks treat all the used water including the grey water. A water retention system has been requested by the Kivalliq Inuit Association. The design will be submitted soon. An effluent dissipation system is also planned to be constructed during the summer 2013. This effluent dissipation system will stabilise the soil and prevent erosion between the camp and the Meliadine lake.*
- *Some secondary containments required carbon filter drains to allow treatment and removal of contact water.*
 - ✓ *Filters were bought and installed.*
- *One fuel transfer station required a secondary containment.*
 - ✓ *The secondary containment has been installed.*

On May 3rd, AEM received an order from the Nunavut Government, department of environment, to take action to:

- *Secure the garbage in front of the incinerator sea can, located within the camp, in an animal proof container (ex. sea can or bear proof container) instead of in an open wooden box without a lid.*
- *The incinerator sea can and the garbage storage bin doors should be closed at all times unless the garbage is being immediately incinerated and someone is in attendance.*
- ✓ *Following this order, AEM has accelerated the process to improve the wildlife management at the Meliadine camp site. Many improvements were done on the waste management, new incinerators were put in operation, access under building was blocked, training was given, audit was conducted by an external firm, two (2) local Inuit workers were hired to manage the wildlife, etc.*

On July 20th, AEM received a stop work order from the KIA due to the migration of a caribou herd in the area.

- ✓ *A complete revision of the wildlife management procedures and protocols was conducted and submitted to KIA for approbation.*
- ✓ *A meeting between the CLARK, the HTO, the KIA, the Nunavut government and AEM has been realized to discuss the caribou situation in the Meliadine project area. AEM presented its protocols and procedures, discussions were held on these matters . Following this meeting, a wildlife management report is sent twice a month to expose the situation on the camp site.*

j) a summary of drilling activities and progressive reclamation of drill sites;

	Number of holes	Meters drilled
Geotech	67	804.1
Exploration and conversion	532	145 178
Total	599	145 982

Anecdotal observations of progressive reclamation at drill holes shows vegetation establishing itself over time. It is not new vegetation but earlier vegetation re-emerging. When drill cuttings are concentrated it takes longer than when the cuttings are more diffuse. This is understandable as concentrated drill cuttings may smother or inhibit the re-emergence of plants while diffuse cuttings do not.

- k) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;

There were no reclamation activities related to licence 2BB-MEL0914 for 2012.

- l) a summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed;

No request received in 2012, but a study on the grey water treatment was conducted in 2012 and an audit on the wildlife management was conducted by the consultant Bearwise. The reports are in appendix C.

- m) a public consultation/participation report describing consultation with local organizations and residents of the nearby communities, if any were conducted;

Agnico-Eagle Mines Limited (AEM) had an active public consultation program in 2012. The consultation had several purposes:

- 1. To inform the public of the ongoing advanced exploration program at the Meliadine site;*
- 2. To describe the proposed Meliadine Gold Mine and the opportunities it will offer to the Kivalliq region;*
- 3. To listen to the members of the Kivalliq communities on their environmental concerns resulting from the development and their expectations in regards to the opening of the Meliadine Gold Mine; and*
- 4. Regulatory consultation in regards to the Phase 1 All Weather Access Road (AWAR) and the forthcoming Environmental Impact Statement.*

Public and regulatory consultations are outlined in the following table.

2012		
January 11-13	Rankin Inlet	A workshop with the KIA and NTI to discuss per-EIS concepts.
January 31	Rankin Inlet	AEM participated in the EIS guidelines workshop chaired by the NIRB. Federal and territorial government departments were represented.
February 1	Rankin Inlet	Meeting with Fisheries and Oceans Canada and Environment Canada on the Multiple Accounts Analysis carried out on selecting a Tailings Storage Facility. The location was highlighted, the waste rock wrapping around the Tailings Storage Facility and eventual cover at end of mine life with 2 m of waste rock. Discussed the WestBay groundwater well to obtain water samples, exploration using the decline.
February 29	Rankin Inlet	A public meeting with the community. The meeting covered the status of the Meliadine Project with emphasis on the planned construction of the Phase 1 AWAR between Rankin Inlet and the Meliadine Project site. Options for a bypass road around the hamlet were presented with support for keeping AEM traffic outside the community. Other topics touched on the fate of the existing Char River bridge, the formation of a Liaison Committee for Rankin Inlet, plans for the Itivia harbour area and employment opportunities in the building of the road.
March 14	Conference call	First meeting on the Wildlife Mitigation and Monitoring Plan with Government of Nunavut, Environment Canada, Fisheries and Oceans Canada, Golder Associates wildlife biologists and AEM.
April 16-19	Iqaluit	Participation to the Nunavut Mining Symposium.
April 18	Iqaluit	Presentation made to the NIRB and the NWB on the proposed Meliadine All-weather Access Road and update on the exploration project.
April 23	Rankin Inlet	Meetings with the CLARC and HTO. Discussions covered an update on the Phase 1 AWAR, blasting at the rock quarry on municipal land, alternatives for the hamlet bypass road, use of the Itivia harbour area by the community, wildlife problems with foxes at the Meliadine site, use of the Phase 1 road, bridges over the rivers.
May 7-9	Rankin Inlet	Inuit Impact and Benefit Agreement negotiation between KIA and AEM.
June 18	Rankin Inlet	A presentation was given to the Kivalliq Wildlife Board, which provided an update on wildlife management at Meliadine.
June 21	Rankin Inlet	A site visit was made by two representatives of the GN, Kivalliq Regional Wildlife Manager and the local conservation officer, and two representatives of the HTO, Chairman and vice-Chairman. The focus of the visit was wildlife management.
July 10-12	Rankin Inlet	Inuit Impact and Benefit Agreement negotiation between KIA and AEM.
August 15-17	Rankin Inlet	A site visit to the Meliadine Advanced Exploration Camp by Nicola Johnson and Elizabeth Patreau of Fisheries and Oceans Canada. The focus of the visit was the review of and feedback on the No Net Loss Plan and proposed monitoring plan.
August 16	Rankin Inlet	Site visit of the Phase 1 AWAR by two representatives of the Hunters and Trappers' Organization. Progress on the bridges and road was viewed.
August 23	Rankin Inlet	A Hunters and Trappers' Organization Board Meeting was attended to discuss wildlife management in Meliadine.
August 24	Rankin Inlet	Site visit of Meliadine Advanced Exploration Camp by the Hamlet Council, KIA and HTO.
September 5	Rankin Inlet	Site visit by AANDC and KIA. Discussions centered on AEM's future submission of the DEIS.

September 11	Rankin Inlet	Site visit of the Phase 1 AWAR by KIA and CLARC representatives. Progress on the bridges and road was viewed.
October 1	Rankin Inlet	Community public consultation to review VECs and VSECs for the Meliadine Project. All communities mentioning caribou, employment and training as very important components.
October 2	Chesterfield Inlet	
October 3	Whale Cove	
October 4	Arviat	
October 4	Arviat	A meeting with DOE - Wildlife Division, AEM and Golder Associates on the sharing of caribou data that were collected between 1998 and 2012, and proposed wildlife mitigation measures once the mine is being constructed and operating
October 10	Igloolik	A meeting with DOE – Wildlife Division, AEM and Golder Associates to discuss the sharing of data for raptors and polar bears between 1998 and 2012, and proposed wildlife mitigation measures once the mine is being constructed and operating.
October 9-11	Rankin Inlet	Inuit Impact and Benefit Agreement negotiations between KIA and AEM.
October 17	Rankin Inlet	A meeting with DOE, KIA and HTO to discuss the wildlife management at Meliadine.
October 16-17	Rankin Inlet	Regional Socio-Economic Monitoring Committee meeting where AEM shared the socio-economic data collected with the Government of Nunavut and other members of the Committee.

- n) Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.

No details were requested by the Board.

Part F clause 3:

Drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the annual report, including the location (GPS coordinates) and dates.

No drill holes had artesian flow.

Part F, clause 4:

Where drilling activity has penetrated below the permafrost layer, the NWB requests that the proponent record the depth of permafrost and location of the drill hole to be included within the annual report.

The lower permafrost boundary varies from point-to-point. AEM's estimate for this boundary is from approximately 425 to 450 metres. The only way we are sure a hole penetrates the permafrost boundary is when the presence of water is detected.

Drill holes passing through the permafrost boundary are in the table below. These are angled drill holes exceeding 600 metres in length.

Hole number	UTM_E	UTM_N	HoleLength
M12-1816	554503	6982067	618
M12-1771	542836	6986808	669
M12-1758	542937	6986823	666
M12-1809	539169	6988515	603
M12-1817	540635	6988521	657
M12-1730	540095	6988546	642
M12-1810	538805	6988585	603
M12-1725	539025	6988615	615
M12-1841	539020	6988617	657
M12-1861	538927	6988619	654
M12-1767	539075	6988725	678
M12-1775	539180	6988740	636
M12-1759	539180	6988740	687
M12-1799	539130	6988745	700
M12-1787	539355	6988757	744
M12-1785	539010	6988761	624
M12-1772A	538910	6988811	801
M12-1652	539760	6988854	609
M12-1741	539680	6988855	632
M12-1791	538920	6988856	666
M12-1770A	538650	6988863	660
M12-1786	538725	6988867	654
M12-1733	539455	6988869	624
M12-1738	538680	6988871	648
M12-1769	539530	6988874	794
M12-1763C	539380	6988875	606
M12-1763A	539380	6988876	660
M12-1764	538611	6988878	631
M12-1726A	540281	6988879	618
M12-1757	539240	6988880	641
M12-1780	538860	6988895	633
M12-1749	538770	6988896	690
M12-1588	538582	6989004	681
M12-1628	538581	6989050	780
M12-1540	538465	6989066	750
M12-1490	538470	6989129	726
M12-1563	538580	6989130	844

Part H, clause 3:

The licensee shall review the (Spill Contingency) plan referred to in this part as required by changes in operation and/or technology and modify the plan accordingly. Further revisions to the plan are to be submitted in the form of an addendum to be included with the annual report, unless otherwise by an inspector.

The spill management plan was updated October 2012 and is in appendix D

Part I, clause 4:

The licensee shall review the (Abandonment and restoration) plan referred to in this part as required by changes in operation and/or technology and modify the plan accordingly. Revisions to the plans are to be submitted in the form of an addendum to be included with the annual report.

The Abandonment and restoration plan was updated November 2010 and forwarded to the NWB.

Appendix A

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

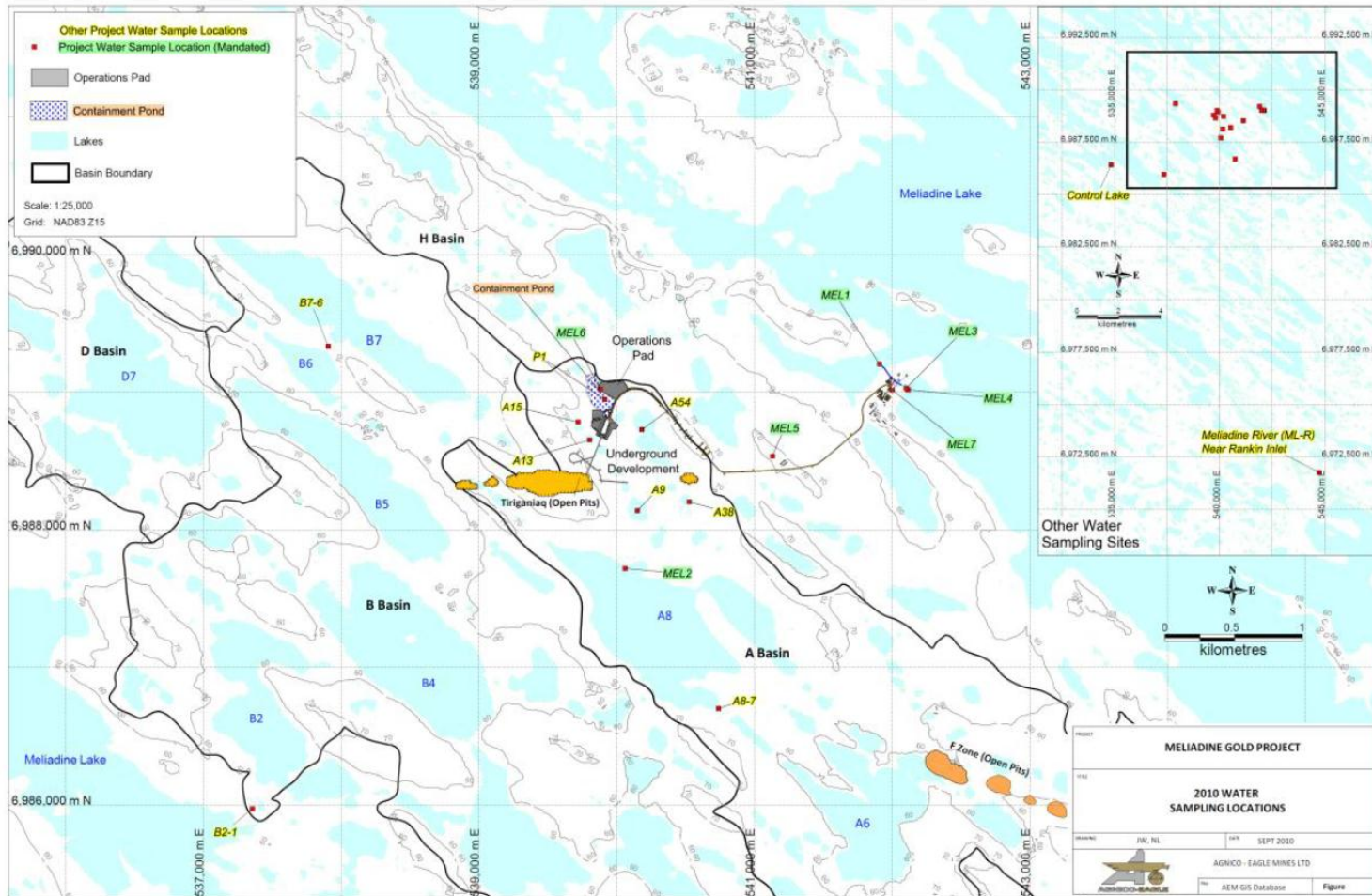


Figure 1 Water Monitoring Meliadine Area

Waterbody	Units	CCME	A8-7				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690	540748 -6986690
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.96	11.5	11.9	1.6	4.5
pH	pH units		12.3	7.82	7.77	9.14	7.69
Conductivity	(µS/cm)		177	201	215	220	190
Laboratory-Measured							
Ion balance	%		102	-	-	104	95.5
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0052	0.002
Phosphorus (P)-Total Reactive	mg/L		0.001	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.21	0.31	0.3	<0.20	0.27
Total Suspended Solids	mg/L		<5.0	<5.0	<5.0	9	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	35	38	39	40
Bicarbonate (HCO3)	mg/L		-	43	46	48	48
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		24.2	27.1	29.9	30	26.9
Magnesium (Mg)-Dissolved	mg/L		3.01	3.26	3.44	3.94	4.02
Potassium (K)-Dissolved	mg/L		1.52	1.48	1.61	1.59	1.48
Sodium (Na)-Dissolved	mg/L		4.75	5.44	5.32	6.55	6.37
Chloride	mg/L		34.2	38.7	40.6	41.1	41.5
Conductivity	umhos/cm		188	205	181	227	234
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		72.6	94.2	88.3	83.6	99.4
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		4.47	5.24	5.24	5.54	5.93
TDS (Calculated)	mg/L		90.2	152	125	148	152
Aluminum (Al)-Total	mg/L	0.1	0.0077	0.0065	<0.0050	0.0055	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00136	0.00208	0.00187	0.00187	0.00147
Barium (Ba)-Total	mg/L		0.0234	0.0243	0.0218	0.0199	0.0235
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000015	0.00001	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		24.4	31.3	29.6	27.6	33.5
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	Equation	0.00062	0.00094	0.00073	0.00092	0.00074
Iron (Fe)-Total	mg/L	0.3	<0.10	0.1	-	0.1	<0.10
Lead (Pb)-Total	mg/L	Equation	0.000119	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		0.0083	0.0092	0.009	0.0095	0.0099
Magnesium (Mg)-Total	mg/L		3.03	3.9	3.52	3.57	3.83
Manganese (Mn)-Total	mg/L		0.013	0.0139	0.00814	0.013	0.00479
Molybdenum (Mo)-Total	mg/L	0.073	0.0002	0.00025	0.00025	0.00026	0.00023
Nickel (Ni)-Total	mg/L	Equation	<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		1.31	1.61	1.51	1.6	1.71
Rubidium (Rb)-Total	mg/L		0.00141	0.00176	0.00165	0.0017	0.00181
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.564	0.433	0.343	0.479	0.472
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		4.52	6.28	5.6	5.85	5.97
Strontium (Sr)-Total	mg/L		0.173	0.206	0.182	0.181	0.201
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00056	0.00053	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L		0.00047	0.00023	0.00017	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<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	0.03	0.0031	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Sodium Adsorption Ratio		0.03	-	0.26	0.25	0.28	0.3
Turbidity	NTU		0.45	0.68	0.68	1.13	0.36
pH	pH units	6.5-9.0	-	7.85	7.77	7.63	7.8

Waterbody	Units	CCME	A8				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142	0540181, 6987142
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.55	12.8	14.4	1.8	4.1
pH	pH units		13.8	7.87	7.94	9.04	7.79
Conductivity	(µS/cm)		180	207	232	222	180
Laboratory-Measured							
Ion balance	%		99.6	-	-	93.9	97.6
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.010	<0.010	<0.010	0.011	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.0017	<0.010	<0.010	0.0045	0.0026
Phosphorus (P)-Total Reactive	mg/L		0.0011	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.25	0.36	0.3	<0.20	0.3
Total Suspended Solids	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	35	46	40	39
Bicarbonate (HCO3)	mg/L		-	42	56	49	48
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		24	28.3	33.7	27.1	28.5
Magnesium (Mg)-Dissolved	mg/L		3.07	3.25	3.75	3.87	3.89
Potassium (K)-Dissolved	mg/L		1.56	1.44	1.72	1.49	1.46
Sodium (Na)-Dissolved	mg/L		4.72	5.53	5.5	5.36	5.78
Chloride	mg/L		34.2	38.8	41.5	40.8	41.7
Conductivity	umhos/cm		188	205	190	228	233
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		72.6	90.5	99.4	113	101
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		4.71	5.24	5.42	5.53	5.67
TDS (Calculated)	mg/L		91.3	158	134	148	151
Aluminum (Al)-Total	mg/L	0.1	0.0077	0.0093	<0.0050	0.013	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00136	0.00255	0.00213	0.00123	0.00161
Barium (Ba)-Total	mg/L		0.0234	0.0253	0.0239	0.0146	0.0238
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000015	<0.000010	<0.000010	0.000018	<0.000010
Calcium (Ca)-Total	mg/L		24.4	30.1	33.3	38.2	34.5
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	0.0031	<0.0010
Cobalt (Co)-Total	mg/L		<0.00020	<0.00020	<0.00020	0.0002	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.00062	0.00101	0.00115	0.00115	0.00078
Iron (Fe)-Total	mg/L	0.3	<0.10	0.17	<0.10	2.97	<0.10
Lead (Pb)-Total	mg/L	Equation	0.000119	<0.000090	<0.000090	0.0551	<0.000090
Lithium (Li)-Total	mg/L		0.0083	0.0091	0.0082	0.0062	0.0099
Magnesium (Mg)-Total	mg/L		3.03	3.73	3.94	4.27	3.73
Manganese (Mn)-Total	mg/L		0.013	0.0371	0.00647	0.0065	0.00521
Molybdenum (Mo)-Total	mg/L	0.073	0.0002	0.00023	0.00022	<0.00020	0.00023
Nickel (Ni)-Total	mg/L	Equation	<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		1.31	1.56	1.62	1.74	1.73
Rubidium (Rb)-Total	mg/L		0.00141	0.00172	0.00184	0.00113	0.00185
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.564	0.419	0.655	0.339	0.494
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		4.52	6.03	5.89	6.07	6.16
Strontium (Sr)-Total	mg/L		0.173	0.198	0.186	0.118	0.211
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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	0.00078	<0.00020
Titanium (Ti)-Total	mg/L		0.00056	0.0005	<0.00050	0.00068	<0.00050
Tungsten (W)-Total	mg/L		0.00047	0.00018	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.00020	<0.00020	<0.00020	0.00057	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0031	<0.0020	<0.0020	0.0052	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.26	0.24	0.25	0.27
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.47	0.53	0.39	1.04	0.48
pH	pH units	6.5-9.0	-	7.83	7.98	7.62	7.81

Waterbody	Units	CCME	A9				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			540194-6988142	540194-6988142	540194-6988142	540194-6988142	540194-6988142
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.48	10.9	13	1	4
pH	pH units		18.2	7.81	7.71	9.06	7.97
Conductivity	(µS/cm)		483	726	972	1046	1080
Laboratory-Measured							
Ion balance	%		99.7	-	-	102	108
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.010	<0.010	<0.010	0.011	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0088	0.0038
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.53	0.69	0.68	0.57	0.46
Total Suspended Solids	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	46	57	62	60
Bicarbonate (HCO3)	mg/L		-	56	69	76	74
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		63.8	101	134	140	160
Magnesium (Mg)-Dissolved	mg/L		7.95	11	13.2	17.8	18.9
Potassium (K)-Dissolved	mg/L		2.7	3.51	4.83	5.69	4.97
Sodium (Na)-Dissolved	mg/L		10.5	18.3	19.7	25.8	23.2
Chloride	mg/L		111	180	234	268	282
Conductivity	umhos/cm		508	721	762	1060	1130
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		192	304	381	430	487
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		25.1	30.2	31.2	33	35.2
TDS (Calculated)	mg/L		243	558	555	686	733
Aluminum (Al)-Total	mg/L	0.1	0.0066	0.0086	<0.0050	0.0158	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00245	0.00344	0.00361	0.00349	0.00237
Barium (Ba)-Total	mg/L		0.0624	0.105	0.106	0.109	0.121
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.00002	0.000013	0.000013	0.000015	<0.000010
Calcium (Ca)-Total	mg/L		69.3	101	129	146	168
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	0.00031	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.00168	0.00224	0.00214	0.00226	0.0016
Iron (Fe)-Total	mg/L	0.3	0.21	0.19	0.19	0.28	0.1
Lead (Pb)-Total	mg/L	Equation	0.000104	0.00235	0.000251	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		0.0248	0.042	0.0539	0.0614	0.0567
Magnesium (Mg)-Total	mg/L		7.54	12.5	14.1	16.1	16.3
Manganese (Mn)-Total	mg/L		0.00752	0.0143	0.00784	0.0269	0.00729
Molybdenum (Mo)-Total	mg/L	0.073	0.00036	0.00034	0.00052	0.00038	0.00029
Nickel (Ni)-Total	mg/L	Equation	0.0025	0.0037	0.0044	0.0049	0.0041
Phosphorus (P)-Total	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		2.73	3.8	4.63	5.43	5.75
Rubidium (Rb)-Total	mg/L		0.00258	0.00363	0.00449	0.00477	0.00472
Selenium (Se)-Total	mg/L	0.001	<0.0010	0.0017	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.176	1.11	1.39	1.81	2.09
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		9.34	20.4	21.3	22.3	22.8
Strontium (Sr)-Total	mg/L		0.488	0.758	1.06	-	1.11
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00087	0.00125	0.0013	0.00146	0.00131
Tungsten (W)-Total	mg/L		0.0002	0.00011	0.00012	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.00010	0.00011	0.00016	0.00015
Vanadium (V)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0032	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.46	0.43	0.47	0.46
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.84	0.88	1.31	2.73	1.74
pH	pH units	6.5-9.0	-	7.93	7.95	7.84	7.98

Waterbody	Units	CCME	A13				
Year			2012				
Date Sampled			2012-06-21	2012-07-28	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			539828-6988676	539828-6988676	539828-6988676	539828-6988676	539828-6988676
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		8.6	15.4	16.9	1.8	4.7
pH	pH units		7.89	7.56	8.04	7.95	7.84
Conductivity	(µS/cm)		432	1583	2007	1878	1940
Laboratory-Measured							
Ion balance	%		94.4	-	-	96.8	99.2
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.042	<0.010	<0.010	0.035	0.018
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.01	0.0039
Phosphorus (P)-Total Reactive	mg/L		0.013	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.44	0.55	0.8	0.47	0.39
Total Suspended Solids	mg/L		<5.0	<5.0	<5.0	18	<5.0
Alkalinity, Total (as CaCO3)	mg/L		36	41	55	46	48
Bicarbonate (HCO3)	mg/L		44	50	67	56	58
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		57.9	228	281	249	255
Magnesium (Mg)-Dissolved	mg/L		6.94	22.7	27	32.4	25.9
Potassium (K)-Dissolved	mg/L		2.88	8.04	9.9	9.95	6.44
Sodium (Na)-Dissolved	mg/L		12.3	46.6	54.1	51.8	35.7
Chloride	mg/L		109	440	558	549	508
Conductivity	umhos/cm		482	1450	1230	1900	1890
Fluoride	mg/L	0.12	-	-	-	-	<0.50
Hardness (as CaCO3)	mg/L		160	653	790	789	789
Nitrate-N	mg/L	13	<0.050	<0.25	<0.25	<0.25	<0.25
Nitrate and Nitrite as N	mg/L		<0.071	<0.35	<0.35	<0.35	<0.35
Nitrite-N	mg/L	0.197	<0.050	<0.25	<0.25	<0.25	<0.25
Sulfate	mg/L		24.8	73	62.8	85.9	68.7
TDS (Calculated)	mg/L		386	1140	943	1240	1230
Aluminum (Al)-Total	mg/L	0.1	0.0698	<0.050	0.0095	0.0206	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00201	0.0031	0.00453	0.00321	0.00271
Barium (Ba)-Total	mg/L		0.0523	0.194	0.221	0.194	0.193
Beryllium (Be)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	0.016	<0.10	0.011	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000010	<0.00010	0.000024	0.000025	<0.000010
Calcium (Ca)-Total	mg/L		54	222	267	270	278
Cesium (Cs)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		0.00028	<0.0020	<0.00020	0.00047	0.00041
Copper (Cu)-Total	mg/L	Equation	0.00152	0.0024	0.00244	0.00202	0.00174
Iron (Fe)-Total	mg/L	0.3	0.45	<1.0	0.35	0.59	0.75
Lead (Pb)-Total	mg/L	Equation	0.000105	<0.00090	0.000166	0.000124	<0.000090
Lithium (Li)-Total	mg/L		0.0232	0.092	0.122	0.1	0.0896
Magnesium (Mg)-Total	mg/L		8.34	24.3	29.8	27.6	23.4
Manganese (Mn)-Total	mg/L		0.0279	0.0155	0.00845	0.0644	0.0614
Molybdenum (Mo)-Total	mg/L	0.073	0.00064	<0.0020	0.00103	0.00049	0.00035
Nickel (Ni)-Total	mg/L	Equation	0.0042	<0.020	0.0063	0.0062	0.0059
Phosphorus (P)-Total	mg/L		<0.10	<1.0	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		3.8	8	10.3	8.76	7.55
Rubidium (Rb)-Total	mg/L		0.00278	0.0067	0.00852	0.00675	0.00563
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.010	<0.0010	0.0026	<0.0010
Silicon (Si)-Total	mg/L		0.7	1.56	1.62	2.59	2.64
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		16.6	45.9	56.6	46.2	33.3
Strontium (Sr)-Total	mg/L		0.428	1.86	2.26	-	1.93
Tellurium (Te)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.00334	<0.0050	0.0027	0.00244	0.00224
Tungsten (W)-Total	mg/L		0.00047	<0.0010	0.00021	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.0010	0.00023	0.00016	0.00011
Vanadium (V)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.0020	<0.020	<0.0020	0.0024	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.0040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		3.19	2.17	2.33	5.46	7.96
pH	pH units	6.5-9.0	7.50	7.91	8	7.64	7.98
Ortho-Phosphate (PO4-P)	mg/L		-	-	-		-
Sodium Adsorption Ratio			-	0.79	0.82	0.72	0.57

Waterbody	Units	CCME	A15				
Year			2012				
Date Sampled			2012-06-21	2012-07-28	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798	539731.8-6988798
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		1.3	15.6	17.4	1.3	4.3
pH	pH units		7.41	7.17	7.84	7.96	7.55
Conductivity	(µS/cm)		432	1771	2312	1038	2250
Laboratory-Measured							
Ion balance	%		94.9	-	-	95.1	93.4
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.034	<0.010	<0.010	0.02	0.033
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	0.0033	0.0066	0.0033
Phosphorus (P)-Total Reactive	mg/L		0.023	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.43	0.55	0.68	0.32	0.38
Total Suspended Solids	mg/L		7	5	6	<5.0	5
Alkalinity, Total (as CaCO3)	mg/L		27	35	46	44	36
Bicarbonate (HCO3)	mg/L		33	43	56	53	44
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		253	258	329	240	298
Magnesium (Mg)-Dissolved	mg/L		20.7	25.1	28.1	30.9	30.5
Potassium (K)-Dissolved	mg/L		13.1	8.69	9.82	9.25	6.34
Sodium (Na)-Dissolved	mg/L		40.2	56.2	62.8	47.4	35.4
Chloride	mg/L		149	511	635	527	646
Conductivity	umhos/cm		676	1610	1340	767	2330
Fluoride	mg/L	0.12	-	-	-	-	<0.50
Hardness (as CaCO3)	mg/L		711	737	912	95.1	975
Nitrate-N	mg/L	13	<0.25	<0.25	<0.25	<0.25	<0.25
Nitrate and Nitrite as N	mg/L		<0.35	<0.35	<0.35	<0.35	<0.35
Nitrite-N	mg/L	0.197	<0.25	<0.25	<0.25	<0.25	<0.25
Sulfate	mg/L		24.3	96.8	83.7	93.3	71.4
TDS (Calculated)	mg/L		1390	1230	793	1200	1520
Aluminum (Al)-Total	mg/L	0.1	0.0613	<0.050	0.0073	0.0183	0.0066
Antimony (Sb)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.0134	0.0028	0.00437	0.00308	0.00308
Barium (Ba)-Total	mg/L		0.224	0.221	0.254	0.193	0.249
Beryllium (Be)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	0.047	<0.10	0.011	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000049	<0.00010	0.000015	0.000027	0.000037
Calcium (Ca)-Total	mg/L		251	250	313	259	347
Cesium (Cs)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		0.00096	<0.0020	<0.00020	0.00059	0.00053
Copper (Cu)-Total	mg/L	Equation	0.00182	0.0021	0.002	0.00182	0.00132
Iron (Fe)-Total	mg/L	0.3	1.77	<1.0	0.56	0.69	1.47
Lead (Pb)-Total	mg/L	Equation	0.00179	<0.00090	<0.000090	0.000101	0.000137
Lithium (Li)-Total	mg/L		0.216	0.101	0.142	0.0852	0.122
Magnesium (Mg)-Total	mg/L		20.1	27.2	32	29.2	26.5
Manganese (Mn)-Total	mg/L		0.174	0.0086	0.0167	0.116	0.145
Molybdenum (Mo)-Total	mg/L	0.073	0.00234	<0.0020	0.00081	0.00049	0.00041
Nickel (Ni)-Total	mg/L	Equation	0.0049	<0.020	0.0061	0.0055	0.0065
Phosphorus (P)-Total	mg/L		<0.10	<1.0	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		12.4	8.73	10.7	8.61	7.77
Rubidium (Rb)-Total	mg/L		0.0142	0.0075	0.00933	0.00565	0.00592
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.010	<0.0010	0.0019	<0.0010
Silicon (Si)-Total	mg/L		0.903	1.67	1.39	2.69	2.48
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		38.8	56.2	65.1	46.5	36.2
Strontium (Sr)-Total	mg/L		2.59	2.18	2.82	1.8	2.54
Tellurium (Te)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.00221	<0.0050	0.00319	0.00223	0.00268
Tungsten (W)-Total	mg/L		0.00063	<0.0010	0.00013	0.00014	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.0010	0.00017	<0.00010	<0.00010
Vanadium (V)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0066	<0.020	<0.0020	0.0028	0.0104
Zirconium (Zr)-Total	mg/L		<0.00040	<0.0040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		12	3.49	3.6	4.42	14
pH	pH units	6.5-9.0	7.48	7.83	7.89	7.62	7.84
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Sodium Adsorption Ratio			-	0.89	83.7	0.73	0.52
Total Oil and Grease	mg/L		-	-	-	-	-

Waterbody	Units	CCME	A38				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			540500-6988254	540500-6988254	540500-6988254	540500-6988254	540500-6988254
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.53	11.5	13.5	1	5
pH	pH units		15	7.73	7.38	9.66	7.73
Conductivity	(µS/cm)		715	793	905	1022	1050
Laboratory-Measured							
Ion balance	%		104	-	-	103	109
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.097	0.011	0.019	0.064	0.022
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.0029	<0.010	0.013	0.0116	0.0061
Phosphorus (P)-Total Reactive	mg/L		<0.0010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.59	0.82	1.04	0.39	0.68
Total Suspended Solids	mg/L		<5.0	5	<5.0	7	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	62	69	85	80
Bicarbonate (HCO3)	mg/L		-	76	84	104	98
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		78.1	90.9	87.7	118	125
Magnesium (Mg)-Dissolved	mg/L		13.4	14.8	13.6	20.4	20.5
Potassium (K)-Dissolved	mg/L		6.25	6.88	6.66	9	7.65
Sodium (Na)-Dissolved	mg/L		40.4	40.4	44	48.6	44.1
Chloride	mg/L		162	185	208	250	240
Conductivity	umhos/cm		744	784	736	1040	1030
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		257	291	311	366	387
Nitrate-N	mg/L	13	1.1	0.225	<0.050	<0.050	<0.050
Nitrate and Nitrite as N	mg/L		1.1	0.225	<0.071	<0.071	<0.071
Nitrite-N	mg/L	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		38.9	42.2	39.1	39.9	39.1
TDS (Calculated)	mg/L		378	552	537	678	668
Aluminum (Al)-Total	mg/L	0.1	0.0058	0.0065	0.0067	0.0271	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00233	0.00341	0.00467	0.00609	0.00272
Barium (Ba)-Total	mg/L		0.059	0.0765	0.0723	0.0791	0.0803
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000013	<0.000010	<0.000010	0.000018	<0.000010
Calcium (Ca)-Total	mg/L		81	88	97	116	126
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	0.00025	0.00058	0.00022
Copper (Cu)-Total	mg/L	Equation	0.0012	0.00182	0.00206	0.002	0.00121
Iron (Fe)-Total	mg/L	0.3	0.11	0.12	0.35	0.61	0.13
Lead (Pb)-Total	mg/L	Equation	0.000153	<0.000090	<0.000090	0.000239	<0.000090
Lithium (Li)-Total	mg/L		0.0224	0.0264	0.0283	0.0361	0.0367
Magnesium (Mg)-Total	mg/L		12.4	16.9	16.6	18.5	17.4
Manganese (Mn)-Total	mg/L		0.00328	0.00692	0.0202	0.0464	0.0152
Molybdenum (Mo)-Total	mg/L	0.073	0.00058	0.0006	0.00063	0.00046	0.00035
Nickel (Ni)-Total	mg/L	Equation	<0.0020	0.0027	0.004	0.0043	0.0038
Phosphorus (P)-Total	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		5.82	7.48	7.85	8.12	8.35
Rubidium (Rb)-Total	mg/L		0.00425	0.00542	0.00561	0.00498	0.00539
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.126	0.336	0.734	1.28	0.935
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		36.4	40.3	43.4	48.4	40.8
Strontium (Sr)-Total	mg/L		0.707	0.757	0.881	-	0.941
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00098	0.00109	0.00162	0.00161	0.00113
Tungsten (W)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	0.0004	0.0003	0.0003	0.00045	0.00042
Vanadium (V)-Total	mg/L		<0.00020	0.0002	<0.00020	0.00036	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.0020	0.0023	<0.0020	0.0021	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	1.04	1.16	1.1	0.96
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.68	0.98	1.87	3.93	1.15
pH	pH units	6.5-9.0	-	8.08	7.97	7.92	8.08

Waterbody	Units	CCME	P-1				
Year			2012				
Date Sampled			2012-06-21	2012-07-28	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			539901-6988966	539901-6988966	539901-6988966	539901-6988966	539901-6988966
Source			ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		8.0	14.4	14.8	1.6	4
pH	pH units		8.3	7.88	8.2	8.2	8.33
Conductivity	(µS/cm)		95	282	824	1005	450
Laboratory-Measured							
Ion balance	%		101	-	-	104	111
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.011	0.012	<0.010	0.035	0.015
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	0.021	0.014	0.01	0.0038	0.0068
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.41	0.99	1	0.51	0.79
Total Suspended Solids	mg/L		<5.0	5	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		30	98	119	56	152
Alkalinity Bicarbonate (HCO3)	mg/L		37	119	142	68	172
Alkalinity Carbonate (CO3)	mg/L		<12	<12	<12	<12	<12
Alkalinity Hydroxide (OH)	mg/L		<6.8	<6.8	<6.8	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L		14.5	45.5	45.8	108	74.1
Magnesium (Mg)-Dissolved	mg/L		2.00	5.32	5.35	18.3	9
Potassium (K)-Dissolved	mg/L		1.30	2.64	2.89	9.74	3.6
Sodium (Na)-Dissolved	mg/L		2.97	7.86	7.08	59.2	11.8
Chloride	mg/L		9.08	25.5	31.1	250	46
Conductivity	umhos/cm		108	274	232	1030	498
Fluoride	mg/L	0.12	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		38.5	133	155	347	208
Nitrate-N	mg/L	13	0.218	<0.050	<0.050	0.255	<0.050
Nitrate and Nitrite as N	mg/L		0.218	<0.071	<0.071	0.255	<0.071
Nitrite-N	mg/L	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		7.70	11.4	5.56	55.1	21.4
TDS (Calculated)	mg/L		76.0	214	181	667	324
Aluminum (Al)-Total	mg/L	0.1	0.0600	0.0063	<0.0050	0.0062	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00746	0.00801	0.00688	0.00245	0.00468
Barium (Ba)-Total	mg/L		0.0129	0.0309	0.036	0.062	0.0446
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		12.4	43.5	51.4	108	72
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	0.00022	<0.00020	<0.00020	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.00136	0.00224	0.00226	0.00107	0.00156
Iron (Fe)-Total	mg/L	0.3	0.17	0.4	0.55	<0.10	0.34
Lead (Pb)-Total	mg/L	Equation	0.000657	0.000178	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.0020	<0.0020	0.0028	0.0319	0.0033
Magnesium (Mg)-Total	mg/L		1.85	5.84	6.56	18.9	9.92
Manganese (Mn)-Total	mg/L		0.0169	0.0232	0.0108	0.00878	0.0148
Molybdenum (Mo)-Total	mg/L	0.073	0.00054	0.00059	0.00056	0.00052	0.00053
Nickel (Ni)-Total	mg/L	Equation	<0.0020	0.0036	0.0035	0.0031	0.004
Phosphorus (P)-Total	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		1.22	2.71	3.22	9.18	3.77
Rubidium (Rb)-Total	mg/L		0.00122	0.00248	0.00297	0.00621	0.0031
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.286	0.156	0.257	0.421	0.677
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		3.00	7.95	9.36	49.1	10.3
Strontium (Sr)-Total	mg/L		0.0704	0.248	0.289	0.9	0.405
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00163	<0.00050	<0.00050	0.0011	0.00078
Tungsten (W)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	0.00016	0.00022	0.00038	0.00069
Vanadium (V)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	0.00022
Zinc (Zn)-Total	mg/L	0.03	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		2.4	2.04	1.69	1.17	2.42
Ortho-Phosphate (O-PO4)	mg/L		-	-	-	-	-
Sodium Adsorption Ratio			-	0.29	0.26	1.15	0.35
Total Oil and Grease	mg/L		-	-	-	-	-
pH	pH units	6.5-9.0	7.41	8.27	8.31	7.84	8.54

Waterbody	Units	CCME	B7-6				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			-	-	-	-	-
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.56	11.5	18.2	2.7	3.7
pH	pH units		11.3	8.11	8.16	9.08	7.87
Conductivity	(µS/cm)		141	175	184	175	150
Laboratory-Measured							
Ion balance	%		101	-	-	98.4	93.6
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.015	<0.010	<0.010	<0.010	0.029
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0036	0.0029
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.29	0.36	0.34	<0.20	0.34
Total Suspended Solids	mg/L		<5.0	6	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	30	32	33	34
Bicarbonate (HCO3)	mg/L		-	37	40	40	41
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		20.4	26	23.9	24.9	25.9
Magnesium (Mg)-Dissolved	mg/L		2.04	2.22	1.95	2.24	2.8
Potassium (K)-Dissolved	mg/L		1.31	1.27	1.23	1.31	1.39
Sodium (Na)-Dissolved	mg/L		3.03	3.47	2.69	3.68	3.85
Chloride	mg/L		26.5	32.4	34	32.5	38.1
Conductivity	umhos/cm		152	176	161	184	212
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		59.3	79	76.2	68.9	83.8
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.33	3.93	3.65	3.59	4.81
TDS (Calculated)	mg/L		72.5	106	126	119	138
Aluminum (Al)-Total	mg/L	0.1	0.0054	<0.0050	<0.0050	<0.0050	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00083	0.00138	0.0013	0.00104	0.00119
Barium (Ba)-Total	mg/L		0.0229	0.0247	0.0223	0.0193	0.0245
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000019	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		21.3	27.4	26.8	23.6	29.9
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	Equation	0.00059	0.00094	0.00098	0.00075	0.00097
Iron (Fe)-Total	mg/L	0.3	0.11	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		0.0077	0.01	0.0099	0.0091	0.0109
Magnesium (Mg)-Total	mg/L		2	2.59	2.22	2.39	2.65
Manganese (Mn)-Total	mg/L		0.0164	0.00908	0.0054	0.00671	0.00343
Molybdenum (Mo)-Total	mg/L	0.073	<0.00020	<0.00020	0.00023	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	Equation	<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		1.1	1.38	1.31	1.28	1.44
Rubidium (Rb)-Total	mg/L		0.00115	0.00151	0.00145	0.00142	0.00155
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.394	0.449	0.234	0.242	0.276
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		2.84	3.84	3.38	4.02	3.55
Strontium (Sr)-Total	mg/L		0.162	0.203	0.188	0.159	0.211
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00036	<0.00050	<0.00050	<0.00050	<0.00050
Tungsten (W)-Total	mg/L		0.00011	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<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	0.03	<0.0020	0.0021	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.18	0.14	0.21	0.19
Ortho-Phosphate (O-PO4)	mg/L		-	-	-	-	-
Turbidity	NTU		0.42	0.72	0.65	0.79	0.45
pH	pH units	6.5-9.0	-	7.79	7.71	7.61	7.79

Waterbody	Units	CCME	B2-1				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			544790-6971714	544790-6971714	544790-6971714	544790-6971714	544790-6971714
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.8	10.9	12.5	1.8	4.4
pH	pH units		7.4	8.6	8.02	9.46	9.56
Conductivity	(µS/cm)		83	91	114	126	70
Laboratory-Measured							
Ion balance	%		Low EC	-	-	97.5	95.7
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.019	0.0066
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		<0.20	0.3	0.36	0.26	0.36
Total Suspended Solids	mg/L		<5.0	<5.0	<5.0	6	6
Alkalinity, Total (as CaCO3)	mg/L		-	28	32	34	36
Bicarbonate (HCO3)	mg/L		-	35	40	42	43
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		9.7	13.2	12.9	15.3	14.5
Magnesium (Mg)-Dissolved	mg/L		1.12	1.4	1.34	1.52	1.88
Potassium (K)-Dissolved	mg/L		0.93	0.837	0.877	0.994	0.979
Sodium (Na)-Dissolved	mg/L		2.48	3.75	3.28	4.38	4.76
Chloride	mg/L		7.57	9.73	11.3	12.3	12.4
Conductivity	umhos/cm		75	98	102	119	126
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		28.8	40.4	40.5	43.8	49.9
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		2.53	3.82	4.26	4.7	5.1
TDS (Calculated)	mg/L		39	76	54	78	82
Aluminum (Al)-Total	mg/L	0.1	0.0061	0.0089	<0.0050	0.0071	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00064	0.00109	0.00115	0.00106	0.00096
Barium (Ba)-Total	mg/L		0.0107	0.0128	0.0125	0.0126	0.0141
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000161	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		9.08	13.6	13.7	14.7	17.3
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	Equation	0.00094	0.00126	0.00115	0.00127	0.0013
Iron (Fe)-Total	mg/L	0.3	<0.10	0.1	0.13	0.2	<0.10
Lead (Pb)-Total	mg/L	Equation	0.000185	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.0020	<0.0020	0.0022	0.0028	0.0023
Magnesium (Mg)-Total	mg/L		1.06	1.59	1.51	1.73	1.6
Manganese (Mn)-Total	mg/L		0.0146	0.0117	0.0226	0.0278	0.0105
Molybdenum (Mo)-Total	mg/L	0.073	<0.00020	0.00026	0.00031	0.00029	0.00032
Nickel (Ni)-Total	mg/L	Equation	<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		0.841	0.893	0.906	0.968	1.08
Rubidium (Rb)-Total	mg/L		0.00082	0.001	0.00103	0.00109	0.00119
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.239	0.303	0.297	0.449	0.338
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		2.37	4.13	4	4.63	4.57
Strontium (Sr)-Total	mg/L		0.0465	0.0616	0.0605	0.0636	0.0739
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		0.00043	<0.00050	<0.00050	0.00052	<0.00050
Tungsten (W)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<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	0.03	0.006	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.26	0.23	0.3	0.31
Ortho-Phosphate (O-PO4)	mg/L		-	-	-	-	-
Turbidity	NTU		0.38	0.68	1.05	2.23	0.86
pH	pH units	6.5-9.0	-	7.77	7.58	7.55	7.82

Waterbody	Units	CCME	MELIADINE RIVER				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712	544778.3-6971712
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		687	10.3	8.6	1.4	2.1
pH	pH units		17.68	8016	7.77	8.84	7.54
Conductivity	(µS/cm)		62	77	78	102	430
Laboratory-Measured							
Ion balance	%		Low EC	-	-	98.2	102
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0024	0.0017
Phosphorus (P)-Total Reactive	mg/L		<0.010	<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	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	21	23	25	31
Bicarbonate (HCO3)	mg/L		-	25	28	30	38
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		7.22	8.17	7.44	10.7	16.6
Magnesium (Mg)-Dissolved	mg/L		1.05	1.23	1.08	1.59	9.75
Potassium (K)-Dissolved	mg/L		0.77	0.971	0.928	1.3	3.54
Sodium (Na)-Dissolved	mg/L		4.09	5.5	4.22	7.41	58.3
Chloride	mg/L		6.89	10.1	9.95	15.9	115
Conductivity	umhos/cm		68	84	83	113	481
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		22.4	27.5	26	31.7	81.5
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		3.06	3.48	3.4	4.75	14.8
TDS (Calculated)	mg/L		37.5	60	47	73	313
Aluminum (Al)-Total	mg/L	0.1	0.0129	0.0089	<0.0050	0.0055	0.0146
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00025	0.00026	0.00025	0.00028	0.00054
Barium (Ba)-Total	mg/L		0.00955	0.0101	0.00962	0.0102	0.0213
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	1.5	<0.010	<0.010	<0.010	<0.010	0.028
Cadmium (Cd)-Total	mg/L	Equation	0.000016	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		6.7	8.59	8.29	9.69	16.5
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	Equation	0.00085	0.00124	0.00088	0.00105	0.00126
Iron (Fe)-Total	mg/L	0.3	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Lithium (Li)-Total	mg/L		<0.0020	<0.0020	<0.0020	<0.0020	0.0021
Magnesium (Mg)-Total	mg/L		1.01	1.48	1.3	1.82	8.72
Manganese (Mn)-Total	mg/L		0.00467	0.0042	0.00295	0.00265	0.00579
Molybdenum (Mo)-Total	mg/L	0.073	<0.00020	<0.00020	<0.00020	<0.00020	0.00062
Nickel (Ni)-Total	mg/L	Equation	<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		0.862	1.07	1.03	1.28	3.56
Rubidium (Rb)-Total	mg/L		0.00115	0.00151	0.00143	-	0.00287
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	-	<0.0010
Silicon (Si)-Total	mg/L		0.216	0.248	0.197	0.268	0.427
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		3.63	6.34	5.71	8.37	58.8
Strontium (Sr)-Total	mg/L		0.0316	0.0388	0.0378	0.0464	0.134
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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	0.0002	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.00067	0.00059	<0.00050	<0.00050	0.00083
Tungsten (W)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.00010	<0.00010	<0.00010	0.00017
Vanadium (V)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.47	0.38	0.65	2.83
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.45	0.4	0.35	1.25	0.42
pH	pH units	6.5-9.0	-	7.63	7.49	7.51	7.65

Waterbody	Units	CCME	CONTROLE LAKE				
Year			2012				
Date Sampled			2012-06-25	2012-07-29	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333	535000.8-6986333
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		7.84	11.7	13	3.5	4.5
pH	pH units		8.7	8.1	8.33	8.94	7.75
Conductivity	(µS/cm)		62	165	70	68	20
Laboratory-Measured							
Ion balance	%		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	2.33	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0036	0.0019
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.22	0.28	0.25	<0.20	0.22
Total Suspended Solids	mg/L		<5.0	9	<5.0	<5.0	<5.0
Alkalinity, Total (as CaCO3)	mg/L		-	23	25	25	25
Bicarbonate (HCO3)	mg/L		-	28	31	31	31
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		8.85	8.78	8.18	9.15	8.22
Magnesium (Mg)-Dissolved	mg/L		1.12	0.996	0.844	0.922	1.05
Potassium (K)-Dissolved	mg/L		0.87	0.885	0.875	0.984	0.894
Sodium (Na)-Dissolved	mg/L		4.61	4.06	3.31	4.06	4.15
Chloride	mg/L		7.78	7.15	7.6	7.87	7.83
Conductivity	umhos/cm		79	75	75	80	86
Fluoride	mg/L	0.12	<0.10	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		26.7	27.5	26	26.2	29.3
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		2.48	2.09	2.07	2.08	2.18
TDS (Calculated)	mg/L		41.9	56	41	52	56
Aluminum (Al)-Total	mg/L	0.1	<0.0050	0.0073	<0.0050	0.0068	<0.0050
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00041	0.00048	0.00051	0.00051	0.00047
Barium (Ba)-Total	mg/L		0.0102	0.00837	0.00761	0.00709	0.00788
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	1.5	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L		8.73	9.2	8.72	8.79	10.2
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	Equation	0.00077	0.00106	0.0008	0.00102	0.00094
Iron (Fe)-Total	mg/L	0.3	<0.10	<0.10	<0.10	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation	0.000118	<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		1.03	1.1	1.02	1.04	0.944
Manganese (Mn)-Total	mg/L		0.0102	0.00572	0.005	0.00337	0.0021
Molybdenum (Mo)-Total	mg/L	0.073	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	Equation	<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		0.908	0.961	0.923	1.02	1.06
Rubidium (Rb)-Total	mg/L		0.00093	0.00106	0.00101	0.00104	0.00114
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.139	0.163	0.148	0.128	0.127
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		4.06	4.61	4.3	4.59	4.22
Strontium (Sr)-Total	mg/L		0.0298	0.0289	0.0281	0.027	0.0331
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<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		<0.00020	<0.00050	<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	0.015	<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	0.03	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Sodium Adsorption Ratio		0.03	-	0.35	0.29	0.39	0.36
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.49	0.36	0.76	0.46	0.74
pH	pH units	6.5-9.0	-	7.64	7.55	7.53	7.76

Waterbody	Units	CCME	MEL-1				
			2012				
Date Sampled			2012-06-21	2012-07-25	2012-08-20	2012-09-18	2012-10-01
GPS Coordinates			541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB			ALS LAB	ALS LAB	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		3	10.1	11.1	4.6	3
pH	pH units		7.82	8.11	8.56	8.75	6.68
Conductivity	(µS/cm)		40	61	57	69	20
Laboratory-Measured							
Fecal Coliforms	MPN/100mL		<1	<1	<1	>200	<3
Total Coliforms	mg/L		<1	<1	3	>200	7
E. Coli	mg/L		<1	<1	<1	1	<3
Total Oil and Grease	mg/L		<1.0	<1.0	-	<2.0	<1.0
Ion balance	%		Low EC	-	-	-	Low EC
Biochemical Oxygen Demand	mg/L		<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33	0.020	<0.010	<0.010	<0.010	<0.010
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	-	-	-
Phosphorus (P)-Total Reactive	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		0.2	<0.20	<0.20	<0.20	0.3
Total Suspended Solids	mg/L		9.0	<5.0	<5.0	<5.0	<5.0
Phosphorus (P)-Total	mg/L		-	-	0.0036	0.003	0.008
Alkalinity, Total (as CaCO3)	mg/L		14.1	17.3	17.9	17.7	18.9
Bicarbonate (HCO3)	mg/L		17.2	21.1	21.8	21.6	23
Carbonate (CO3)	mg/L		<0.60	<1.2	<1.2	<0.60	<0.60
Hydroxide (OH)	mg/L		<0.34	<0.68	<0.68	<0.34	<0.34
Calcium (Ca)-Dissolved	mg/L		5.6	6.47	6.98	7.58	9.18
Magnesium (Mg)-Dissolved	mg/L		0.797	1.04	1.09	1.33	1.22
Potassium (K)-Dissolved	mg/L		0.31	0.76	0.836	0.96	1.09
Sodium (Na)-Dissolved	mg/L		2.3	4.02	3.92	4.82	4.37
Chloride	mg/L		5.25	7.79	7.67	8.6	8.64
Conductivity	umhos/cm		52	70	68	74	84
Fluoride	mg/L	0.12	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		20.1	20.6	20.9	21.7	27.2
Nitrate-N	mg/L	13	<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	0.197	<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L		2.55	3.37	3.16	3.91	4.01
TDS (Calculated)	mg/L		28	44	39	46	0.3
Aluminum (Al)-Total	mg/L	0.1	0.0112	0.0116	0.0062	<0.020	0.0066
Antimony (Sb)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00049	0.00037	0.00038	<0.0010	0.00047
Barium (Ba)-Total	mg/L		0.00752	0.00733	0.00725	0.00749	0.00802
Beryllium (Be)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Boron (B)-Total	mg/L	1.5	0.012	<0.010	<0.010	<0.030	<0.010
Cadmium (Cd)-Total	mg/L	Equation	<0.000010	<0.000010	<0.000010	<0.00020	<0.000010
Calcium (Ca)-Total	mg/L		6.5	6.64	6.57	6.59	8.47
Cesium (Cs)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Chromium (Cr)-Total	mg/L		<0.0010	<0.0010	<0.0010	<0.0020	<0.0010
Cobalt (Co)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.00081	0.00087	0.00083	<0.0020	0.00119
Iron (Fe)-Total	mg/L	0.3	<0.10	<0.10	<0.10	0.19	<0.10
Lead (Pb)-Total	mg/L	Equation	<0.000090	<0.000090	<0.000090	<0.0010	<0.000090
Lithium (Li)-Total	mg/L		<0.0020	<0.0020	<0.0020	0.004	<0.0020
Magnesium (Mg)-Total	mg/L		0.939	0.969	1.09	1.26	1.48
Manganese (Mn)-Total	mg/L		0.0136	0.00534	0.00505	0.0061	0.0066
Molybdenum (Mo)-Total	mg/L	0.073	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Nickel (Ni)-Total	mg/L	Equation	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L		<0.10	<0.10	<0.10	<0.50	<0.10
Potassium (K)-Total	mg/L		0.707	0.762	0.776	0.78	0.945
Rubidium (Rb)-Total	mg/L		0.00079	0.0011	0.00113	0.00126	0.00136
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010
Silicon (Si)-Total	mg/L		0.281	<0.50	0.242	<0.30	0.276
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Sodium (Na)-Total	mg/L		2.46	3.94	3.98	4.36	5.09
Strontium (Sr)-Total	mg/L		0.0296	0.0318	0.0307	0.0316	0.0359
Tellurium (Te)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.00010	<0.00010	<0.0050	<0.00010
Thorium (Th)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Tin (Sn)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00060	<0.00020
Titanium (Ti)-Total	mg/L		0.00036	0.00076	<0.00050	<0.0010	<0.00050
Tungsten (W)-Total	mg/L		<0.00010	<0.00010	<0.00010	<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Vanadium (V)-Total	mg/L		<0.00020	<0.00020	<0.00020	<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0046	<0.0020	<0.0020	<0.020	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.00040	<0.00040	<0.0010	<0.00040
Oil & Grease	mg/L		-	-	<1.0	-	-
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
Turbidity	NTU		0.75	0.67	0.72	0.54	0.52
pH	pH units	6.5-9.0	7.26	7.58	7.37	7.33	7.63

Waterbody	Units	CCME	2BB-MEL0914	MEL-4				
Year				2012				
Date Sampled				2012-06-21	2012-07-25	2012-08-20	2012-09-18	2012-10-01
GPS Coordinates				542092-6989012	542092-6989012	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB				ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments								
Water Temperature	oC		10	1.3	10.3	10.1	4.9	3.4
pH	pH units			8.2	8.24	7.9	8.7	7.17
Conductivity	(µS/cm)			14	63	69	108	50
Laboratory-Measured								
Fecal Coliforms	MPN/100mL		200	>200	>200	>200	>200	4
Total Coliforms	mg/L			>200	>200	>200	>200	9
E. Coli	mg/L			3	2	2	4	<3
Total Oil and Grease	mg/L			<1.0	<1.0	-	<2.0	<1.0
Ion balance	%			Low EC	-	-	-	Low EC
Biochemical Oxygen Demand	mg/L		15	<6.0	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	2.33		0.136	0.032	0.103	0.066	<0.010
Mercury (Hg)-Total	mg/L	0.000026		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	0.082	0.021	0.208	0.046	0.0013
Phosphorus (P)-Total Reactive	mg/L			0.060	0.013	0.103	0.039	<0.010
Total Kjeldahl Nitrogen	mg/L			0.25	0.23	0.9	0.21	0.21
Total Suspended Solids	mg/L		15	<5.0	<5.0	58	31	<5.0
Phosphorus (P)-Total	mg/L			-	-	-	-	0.0013
Alkalinity, Total (as CaCO3)	mg/L			4.9	18.3	22	24	18.2
Bicarbonate (HCO3)	mg/L			6	22.3	27	29	22.2
Carbonate (CO3)	mg/L			<0.60	<1.2	<12	<12	<0.60
Hydroxide (OH)	mg/L			<0.34	<0.68	<6.8	<6.8	<0.34
Calcium (Ca)-Dissolved	mg/L			1.19	6.84	8.08	10.4	8.4
Magnesium (Mg)-Dissolved	mg/L			0.163	1.06	1.18	1.62	1.1
Potassium (K)-Dissolved	mg/L			<0.10	0.824	1.27	1.27	1.04
Sodium (Na)-Dissolved	mg/L			0.725	4.16	5.06	6.67	4.53
Chloride	mg/L			1.19	7.91	8.85	10.7	8.49
Conductivity	umhos/cm			<20	72	81	96	82
Fluoride	mg/L	0.12		-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L			3.6	22	26	28.1	25.4
Nitrate-N	mg/L	13		<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	0.197		<0.050	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L			0.63	3.41	3.51	5.33	3.74
TDS (Calculated)	mg/L			<5.0	43	54	59	57
Aluminum (Al)-Total	mg/L	0.1		0.0114	0.0088	0.0975	0.106	<0.0050
Antimony (Sb)-Total	mg/L			<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005		0.00065	0.00057	0.00146	<0.0010	0.00042
Barium (Ba)-Total	mg/L			0.00176	0.00883	0.0114	0.00822	0.00731
Beryllium (Be)-Total	mg/L			<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L			<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Boron (B)-Total	mg/L	1.5		<0.010	<0.010	<0.010	<0.030	<0.010
Cadmium (Cd)-Total	mg/L	Equation		<0.000010	<0.000010	<0.000010	<0.00020	<0.000010
Calcium (Ca)-Total	mg/L			1.61	6.99	8.31	9.02	7.96
Cesium (Cs)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Chromium (Cr)-Total	mg/L			<0.0010	<0.0010	<0.0010	<0.0020	<0.0010
Cobalt (Co)-Total	mg/L			0.00023	<0.00020	0.00034	<0.00050	<0.00020
Copper (Cu)-Total	mg/L	Equation		0.00043	0.00097	0.00215	<0.0020	0.00117
Iron (Fe)-Total	mg/L	0.3		<0.10	<0.10	0.24	<0.10	<0.10
Lead (Pb)-Total	mg/L	Equation		0.000138	<0.000090	0.000315	<0.0010	<0.000090
Lithium (Li)-Total	mg/L			<0.0020	<0.0020	<0.0020	0.0024	<0.0020
Magnesium (Mg)-Total	mg/L			0.229	1.11	1.29	1.35	1.34
Manganese (Mn)-Total	mg/L			0.0212	0.0122	0.0449	0.0215	0.00374
Molybdenum (Mo)-Total	mg/L	0.073		<0.00020	<0.00020	<0.00020	<0.00050	<0.00020
Nickel (Ni)-Total	mg/L	Equation		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L			0.12	<0.10	0.19	<0.50	<0.10
Potassium (K)-Total	mg/L			0.413	0.893	1.21	1.2	0.94
Rubidium (Rb)-Total	mg/L			0.00037	0.0012	0.00156	0.00156	0.00136
Selenium (Se)-Total	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0050	<0.0010
Silicon (Si)-Total	mg/L			0.093	0.318	0.382	0.37	0.231
Silver (Ag)-Total	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Sodium (Na)-Total	mg/L			1.06	4.24	5.17	5.62	5.04
Strontium (Sr)-Total	mg/L			0.00717	0.0352	0.0408	0.0482	0.0343
Tellurium (Te)-Total	mg/L			<0.00020	<0.00020	<0.00020	<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008		<0.00010	<0.00010	<0.00010	<0.0050	<0.00010
Thorium (Th)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Tin (Sn)-Total	mg/L			<0.00020	<0.00020	<0.00020	<0.00060	<0.00020
Titanium (Ti)-Total	mg/L			<0.00020	<0.00050	0.00535	<0.0010	<0.00050
Tungsten (W)-Total	mg/L			<0.00010	<0.00010	<0.00010	<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015		<0.00010	<0.00010	<0.00010	<0.00050	<0.00010
Vanadium (V)-Total	mg/L			<0.00020	<0.00020	0.0004	<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03		0.0028	<0.0020	0.0026	<0.020	<0.0020
Zirconium (Zr)-Total	mg/L			<0.00040	<0.00040	<0.00040	<0.0010	<0.00040
Ortho-Phosphate (O-PO4)	mg/L			-	-	-	-	-
Oil & Grease	mg/L			<0.10	-	<1.0	-	-
Turbidity	NTU			-	0.56	1.82	0.44	0.39
pH	pH units	6.5-9.1		6.72	7.59	7.35	7.41	7.62

Waterbody	Units	CCME	2BB-MEL0914	MEL-7				
Year				2012				
Date Sampled				2012-06-20	2012-07-24	2012-08-21	2012-09-18	2012-10-01
GPS Coordinates				542001-6989066	542001-6989066	541934.2-6989173	541934.2-6989173	541934.2-6989173
LAB				Mutlilab	Multilab	Multilab	ALS	ALS
Field Measurments								
Water Temperature	oC		10	-	-	-	20.3	NA
pH	pH units			-	-	-	6.78	NA
Conductivity	(µS/cm)			-	-	-	na	NA
Laboratory-Measured								
Fecal Coliforms	MPN/100mL		200	230	500	900	>200	24000
Total Coliforms	mg/L			-	-	-	>200	>110000
E. Coli	mg/L			-	-	-	1600	930
Total Oil and Grease	mg/L			<1.0	<1.0	-	<2.0	<1.0
Ion balance	%			-	-	-	-	114
Biochemical Oxygen Demand	mg/L		15	21.5	22	-	26.9	17.4
Ammonia as N	mg/L	2.33		-	-	-	2.16	2.77
Mercury (Hg)-Total	mg/L	0.000026		-	-	-	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	1.000	-	-	-	9.3	15.1
Phosphorus (P)-Total Reactive	mg/L			-	-	-	10.8	15.2
Total Kjeldahl Nitrogen	mg/L			-	-	-	6.45	9.4
Total Suspended Solids	mg/L		15	36	21	-	65.5	30
Phosphorus (P)-Total	mg/L			-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L			-	-	-	62	69
Bicarbonate (HCO3)	mg/L			-	-	-	75	84
Carbonate (CO3)	mg/L			-	-	-	<12	<12
Hydroxide (OH)	mg/L			-	-	-	<6.8	<6.8
Calcium (Ca)-Dissolved	mg/L			-	-	-	19.7	22.7
Magnesium (Mg)-Dissolved	mg/L			-	-	-	5.56	6.01
Potassium (K)-Dissolved	mg/L			-	-	-	34.2	40.8
Sodium (Na)-Dissolved	mg/L			-	-	-	66.2	75
Chloride	mg/L			-	-	-	81	77.7
Conductivity	umhos/cm			-	-	-	643	702
Fluoride	mg/L	0.12		-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L			-	-	-	59.9	85
Nitrate-N	mg/L	13		-	-	-	15.2	14.6
Nitrate and Nitrite as N	mg/L			-	-	-	16.3	14.8
Nitrite-N	mg/L	0.197		-	-	-	1.11	0.205
Sulfate	mg/L			-	-	-	32.5	35.9
TDS (Calculated)	mg/L			-	-	-	400	444
Aluminum (Al)-Total	mg/L	0.1		-	-	-	0.447	0.531
Antimony (Sb)-Total	mg/L			-	-	-	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.005		-	-	-	0.0013	0.00139
Barium (Ba)-Total	mg/L			-	-	-	0.00166	0.00479
Beryllium (Be)-Total	mg/L			-	-	-	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L			-	-	-	<0.00050	0.00022
Boron (B)-Total	mg/L	1.5		-	-	-	0.14	0.093
Cadmium (Cd)-Total	mg/L	Equation		-	-	-	<0.00020	0.000072
Calcium (Ca)-Total	mg/L			-	-	-	16.3	23.8
Cesium (Cs)-Total	mg/L			-	-	-	<0.00050	<0.00010
Chromium (Cr)-Total	mg/L			-	-	-	<0.0020	<0.0010
Cobalt (Co)-Total	mg/L			-	-	-	<0.00050	0.00039
Copper (Cu)-Total	mg/L	Equation		-	-	-	0.0097	0.016
Iron (Fe)-Total	mg/L	0.3		-	-	-	0.15	0.11
Lead (Pb)-Total	mg/L	Equation		-	-	-	<0.0010	0.00165
Lithium (Li)-Total	mg/L			-	-	-	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L			-	-	-	4.65	6.19
Manganese (Mn)-Total	mg/L			-	-	-	0.0087	0.0234
Molybdenum (Mo)-Total	mg/L	0.073		-	-	-	<0.00050	0.00026
Nickel (Ni)-Total	mg/L	Equation		-	-	-	0.0033	0.0039
Phosphorus (P)-Total	mg/L			-	-	-	9.77	15.1
Potassium (K)-Total	mg/L			-	-	-	37	43.3
Rubidium (Rb)-Total	mg/L			-	-	-	0.0301	0.0354
Selenium (Se)-Total	mg/L	0.001		-	-	-	<0.0050	<0.0010
Silicon (Si)-Total	mg/L			-	-	-	0.92	0.874
Silver (Ag)-Total	mg/L	0.0001		-	-	-	<0.0010	<0.00010
Sodium (Na)-Total	mg/L			-	-	-	76.2	75.9
Strontium (Sr)-Total	mg/L			-	-	-	0.0423	0.0616
Tellurium (Te)-Total	mg/L			-	-	-	<0.0010	<0.00020
Thallium (Tl)-Total	mg/L	0.0008		-	-	-	<0.0050	<0.00010
Thorium (Th)-Total	mg/L			-	-	-	<0.0010	<0.00010
Tin (Sn)-Total	mg/L			-	-	-	0.00193	0.00076
Titanium (Ti)-Total	mg/L			-	-	-	0.0011	0.00229
Tungsten (W)-Total	mg/L			-	-	-	<0.0020	<0.00010
Uranium (U)-Total	mg/L	0.015		-	-	-	<0.00050	<0.00010
Vanadium (V)-Total	mg/L			-	-	-	<0.0020	<0.00020
Zinc (Zn)-Total	mg/L	0.03		-	-	-	0.086	0.39
Zirconium (Zr)-Total	mg/L			-	-	-	<0.0010	<0.00040
Oil & Grease	mg/L			-	-	-	-	-
Turbidity	NTU			-	-	-	7.06	12
pH	pH units	6.5-9.0		7.07	6.93	-	7.18	7.91

Waterbody	Units	CCME	A54				
Year			2012				
Date Sampled			2012-06-21	2012-07-28	2012-08-18	2012-09-17	2012-10-01
GPS Coordinates			540135-6988794	540135-6988794	540135-6988794	540135-6988794	540135-6988794
LAB			ALS	ALS	ALS LAB	ALS LAB	ALS LAB
Field Measurments							
Water Temperature	oC		9.6	14.6	14.2	1.6	4.7
pH	pH units		8.95	6.91	7.75	8.02	7.89
Conductivity	(µS/cm)		670	866	930	1766	1070
Laboratory-Measured							
Ion balance	%		97.8	-	-	101	108
Biochemical Oxygen Demand	mg/L		<6.0	<0.6	<0.6	<0.6	<6.0
Ammonia as N	mg/L	2.33	0.87	0.023	0.011	<0.010	0.023
Mercury (Hg)-Total	mg/L	0.000026	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.004 - 0.01	<0.010	<0.010	<0.010	0.0071	0.0042
Phosphorus (P)-Total Reactive	mg/L		0.011	<0.010	<0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L		1.24	0.72	0.81	0.22	0.7
Total Suspended Solids	mg/L		<5.0	5	<5.0	6	<5.0
Alkalinity, Total (as CaCO3)	mg/L		58	54	50	51	63
Bicarbonate (HCO3)	mg/L		70	66	61	62	76
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		72.7	98.2	86	245	125
Magnesium (Mg)-Dissolved	mg/L		11.4	16.6	14.1	29.5	19.7
Potassium (K)-Dissolved	mg/L		5.33	8.25	7.69	9.51	8.72
Sodium (Na)-Dissolved	mg/L		30.8	46.8	47.1	47	54.1
Chloride	mg/L		149	203	220	513	255
Conductivity	umhos/cm		676	849	762	1780	1140
Fluoride	mg/L	0.12	-	-	-	-	<0.10
Hardness (as CaCO3)	mg/L		228	341	308	754	372
Nitrate-N	mg/L	13	1.27	1.52	0.609	<0.25	0.499
Nitrate and Nitrite as N	mg/L		1.27	1.52	0.609	<0.35	0.499
Nitrite-N	mg/L	0.197	<0.050	<0.050	<0.050	<0.25	<0.050
Sulfate	mg/L		38.6	51.6	50	61	55.3
TDS (Calculated)	mg/L		532	672	582	1160	743
Aluminum (Al)-Total	mg/L	0.1	0.017	<0.050	<0.0050	0.0424	<0.0050
Antimony (Sb)-Total	mg/L		0.00022	<0.0020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.005	0.00335	0.0029	0.00259	0.00382	0.00224
Barium (Ba)-Total	mg/L		0.055	0.0658	0.0626	0.2	0.0707
Beryllium (Be)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	1.5	0.019	<0.10	0.012	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	Equation	0.000031	<0.00010	<0.000010	0.000023	<0.000010
Calcium (Ca)-Total	mg/L		72	105	95	256	122
Cesium (Cs)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L		<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L		<0.00020	<0.0020	<0.00020	0.0004	<0.00020
Copper (Cu)-Total	mg/L	Equation	0.00126	<0.0020	0.00103	0.00228	0.00084
Iron (Fe)-Total	mg/L	0.3	0.19	<1.0	<0.10	0.7	<0.10
Lead (Pb)-Total	mg/L	Equation	0.000495	<0.00090	<0.000090	0.00018	<0.000090
Lithium (Li)-Total	mg/L		0.023	0.026	0.0281	0.114	0.0311
Magnesium (Mg)-Total	mg/L		11	18.9	17.4	27.7	16.3
Manganese (Mn)-Total	mg/L		0.00609	0.0056	0.00889	0.0524	0.0102
Molybdenum (Mo)-Total	mg/L	0.073	0.0008	<0.0020	0.00068	0.0004	0.00048
Nickel (Ni)-Total	mg/L	Equation	0.0031	<0.020	0.0033	0.0053	0.0034
Phosphorus (P)-Total	mg/L		<0.10	<1.0	<0.10	<0.10	<0.10
Potassium (K)-Total	mg/L		5.22	8.98	8.81	8.74	9.45
Rubidium (Rb)-Total	mg/L		0.00426	0.0065	0.00613	0.00622	0.00643
Selenium (Se)-Total	mg/L	0.001	<0.0010	<0.010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L		0.292	<0.50	0.411	2.2	0.395
Silver (Ag)-Total	mg/L	0.0001	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L		32.1	48.9	49	42.7	45.2
Strontium (Sr)-Total	mg/L		0.622	0.957	0.926	1.9	1.01
Tellurium (Te)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.0008	<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L		<0.00010	<0.0010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L		<0.00020	<0.0020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L		0.00158	<0.0050	0.00148	0.0028	0.0015
Tungsten (W)-Total	mg/L		0.00017	<0.0010	<0.00010	0.00012	<0.00010
Uranium (U)-Total	mg/L	0.015	0.00045	<0.0010	0.00035	0.00017	0.0005
Vanadium (V)-Total	mg/L		<0.00020	<0.0020	<0.00020	0.00024	<0.00020
Zinc (Zn)-Total	mg/L	0.03	0.0034	<0.020	<0.0020	0.0024	<0.0020
Zirconium (Zr)-Total	mg/L		<0.00040	<0.0040	<0.00040	<0.00040	<0.00040
Turbidity	NTU		1.52	0.89	1.05	4.56	0.61
Ortho-Phosphate (PO4-P)	mg/L		-	-	-	-	-
pH	pH units	6.5-9.0	7.90	8.04	8.02	7.74	8.14
Sodium Adsorption Ratio			-	1.15	1.24	0.68	1.19
Total Oil and Grease	mg/L		-	-	-	-	-

Appendix B

2012 Inspectors reports

Ministère de l'Environnement

Johanne Coutu-Autut
COIII Rankin Inlet

 (867) 645-8084
 (867) 645-8085



490-2260

Avatiligiyiit

Department of Environment

Ministère de l'Environnement

Wildlife Act , S.NU. 2007, c.8 references:

Dangerous wildlife protection

93. (1) If a conservation officer believes on reasonable grounds that dangerous wildlife is or may be attracted to any land or premises, the conservation officer may

(a) enter and search the land or premises; and

(b) if there is risk to the safety of any person because an attractant is attracting or could attract dangerous wildlife to the land or premises, order the owner, occupier or person in charge of that land or premises to contain, move or remove the attractant within a reasonable period of time specified in the order.

Verbal order

(2) An order under subsection (1) may be made verbally, but must be confirmed in writing and delivered to the person affected within 48 hours.

Dwelling

(3) Any entry and search of a dwelling must be authorized by a warrant and any dangerous wildlife protection order in respect of a dwelling must be issued by a justice of the peace or judge.

Exception

(4) Notwithstanding subsection (1), an order may not be made in respect of

(a) a person who is lawfully trapping; or

(b) a facility lawfully operated by a municipal corporation or a settlement corporation for the disposal of waste.

Wildlife Act, Consolidation of Current to: 2007-12-21

42 S.Nu. 2003,c.26

Compliance

(5) A person to whom an order under this section is made must comply with the order within the period of time specified in the order.

Remedial measures

(6) Where any person fails to take any measures required under subsection (1), a conservation officer may take those measures or cause them to be taken.

Offence

220. (1) A person who contravenes a provision of this Act, the regulations or an order made under this Act is guilty of an offence.

Attempts and accessories

(2) A person who attempts to commit an offence or is an accessory after the fact to the commission of an offence is guilty of an offence, whether or not it was possible under the circumstances to commit the offence.

Parties to offence

(3) Every one is a party to an offence who

(a) actually commits it;

(b) does or omits to do anything for the purpose of aiding any person to commit it;

(c) abets any person in committing it; or

(d) counsels another person to commit or be a party to it.

✉ Bag 002
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Inspection Report

License #: 2BB-MEL0914

Inspector: A.Keim

CIDMS # 525180

Client	Agnico-Eagle Mines Ltd.		
Mailing Address	Agnico-Eagle Mines Ltd 145 King Street East, Suite 400, Toronto, Ontario, M5C 2Y7		
Inspection site location	Meliadine West		
Contact name	Stephen Villeneuve	Title	Project Geologist
Last inspection date	June 24, 2007	August 2, 2008	July 7, 2011
Inspection start date	March 25, 2012		
Region	Kivalliq		



Aboriginal Affairs and
Northern Development Canada

Affaires autochtones et
Développement du Nord Canada

INAC, Nunavut District
Box 100
Building 918
Iqaluit, NU, X0A 0H0

Submitted Via E-Mail

Our File: 2BB-MEL0914

Your File: _____

CIDM # 525180

April 30, 2012

Louise Grondin
Vice-president Environment and Sustainable Development
Agnico-Eagle Mines Ltd
145 King Street East, Suite 400,
Toronto, Ontario, M5C 2Y7
Tel: 416-947-1212
Tel. direct: 416-847-8656
Fax: 416-367-4681
Cell: 819-724-2020
Email: louise.grondin@agnico-eagle.com

RE: Water Licence Inspection March 25th, 2012

On the 25th of March 2012 a compliance inspection was carried out on the Meliadine West Exploration Project and facilities located at Latitude: 63°1'30"N Longitude: 92° 10'20"W in the Kivalliq Region of the Nunavut Territory.

The Inspector thanks Stephan Villeneuve, Guylain Boucher, and Marco Lemelin for their assistance and time during the inspection.

At the time of inspection, camp and associated drilling activities are approved under Water License 2BB- MEL0914, issued on July 31st, 2009 and as amended on June 28th, 2010, July 19, 2010, and on January 6th, 2011. Currently a 4th amendment is pending. An Annual Report for 2011 was filed with the Nunavut Water Board on March 21st, 2012.

The Exploration Camp collects potable water from Meliadine Lake. The Potable Water is run through a system of filters and a UV system prior to use within the Camp. A chlorination pump was also found to have been installed. All equipment was found in good order and in operation during the period of Inspection. A back-up chlorination pump was recommended by the Inspector during the Inspection. Additionally the use of water chlorination chemicals for portable use was identified by the Inspector who noted that the use of Chlorine Bleach could be used as a back-up but should not be used as a substitute for the correct chemical.

During the period of Inspection it was noted that the Environmental staff person was called away from camp and could not be present for the Inspection. As such the Total Daily water use records and STP summary results from testing were not available for review during the inspection. However these results were forwarded following the Inspection and subsequently reviewed. It was noted during the review that Water usage was estimated for a total period of 9 days during the month of March. Use of the driller logs to gain an accurate record of water use is recommended by the Inspector. The licensee is cautioned that they should not exceed the 190 Cubic meter daily limit for water usage as allowed under the issued license.

The following report is based on Observations made at the time of the Inspection;

- Old camp / New camp
- Waste management / Incinerator area / Waste Water Treatment Facilities
- Driller's area
- Garage/ maintenance facilities
- On Ice Drilling activities



Old Camp/ New Camp Facilities and Construction Activities

- Ongoing installation of new accommodation units continues at camp (current capacity is 147 with another 49 man unit to be on line within 30 days)
- Old Weather haven units are being related to other areas of the property. Old spills are to be identified and clean up in the process.
- Generator area was found clean and haz wastes stored on secondary containment.

Incinerator /Waste Management (Waste Water and Solid Waste)

- Ash is noted downwind of the incinerator. A screen should be installed on the flue pipe and chimney.
- Garbage is piled up in a sea-can adjacent to the incinerator. Waste is backed up because of recent blizzards at the site.
- Bag containing haz waste in a box beside the incinerator. Licensee has switched to clear bags to prevent haz waste from entering incinerator.
- One RBC unit is on line and a second will be ready in the next few weeks. STP results show exceedences in fecal coliforms counts consistently every week. The Licensee is to address this and implement proper procedures to prevent the discharge of this material to the environment.
- STP results also show exceedence of the TSS license limit as well.

Garage / Maintenance Facilities

- Secondary Containment is required at all fuel transfer areas . This is to be addressed by the period of the next inspection.
- Hazardous wastes generated in garage and Maintenance areas are placed in lined maxi-bags for disposal off site.
- Hazardous waste shipping records were not available for review during the inspection period and have not been submitted. These will be inspected during the next inspection.

Driller's Area

- Secondary Containment for oil and other drill lubricants etc is required in the sea-cans and storage areas.
- Area was otherwise well organized

Bulk Fuel Storage Area

- Secondary Containment at emergency shelter/ Worker shelter to be replaced. (Large crack noted in plastic tub)
- Fuel nozzles found stored on secondary containment

Cold storage / Garage areas by Portal

- Secondary containment is required for the storage of barrels of oil, fuel and other hazardous materials. One of the garage areas is not lined, the other newer one is.
- Work on Heavy equipment was on-going in the lined garage area during the inspection. A number of Buckets and drums of oils were found to not be on secondary containment.

On-Ice Drilling

- Inspected Drill #8. Found the drill platform and operations to be in order.
- Inspected the discharge line and found the line to be in operation and discharging drill cuttings to the frozen surface of Meliadine Lake.
- Stream vents from under the snow that left tubes of hoarfrost on the surface of the snowpack above the ice show that the cuttings extended under the snowpack for a distance of at least 50 meters from the original discharge line before freezing.
- The Drill was ordered to stop working and not resume until such time as a report on the discharge could be submitted to the Inspector and a plan (SOP- for on-ice drilling) could be developed to prevent cuttings from being deposited on ice and not on land as is required by the license. Failing this the drill was to be moved to land to continue drilling.



Non-Compliance: Issues identified during the Inspection and/or review of the relevant material

Issues where there is a known or suspected violation of a requirement of the Water license or Act;

As relates to solid waste management for the project and on site, the Inspector noted the following;

- Records detailing the back-haul of hazardous and other wastes were not available for review by the Inspector.

As relates to Fuel storage and spill containment for the project and on site the Inspector noted the following;

- Secondary containment is insufficient at the Camp.

Issues where there is a known or anticipated environmental impairment;

- Containment of cuttings is a mandatory requirement of the issued license. The Licensee must undertake further efforts to address the uncontrolled release of cuttings to the surface of the ice as noted during the inspection. Failure to follow the new Winter Drilling Procedure will result in stricter enforcement actions being undertaken by the Inspector. This includes all employees and contractors working on site.
- Secondary Containment is required for fuel storage.
- Carbon filters must be installed on all secondary containment drainage of fuel storage to prevent the release of contaminated contact water built-up inside the secondary containment.

The Licensee is further cautioned to ensure that the most current Water license and all required records are available for the inspector on site during the Inspection.

The Licensee continues to work on achieving compliance with the issued license.

A. Keim
Inspector's Name

Inspector's Signature

Cc:
Phyllis Beaulieu – Manager licensing – Nunavut Water Board

WATER USE INSPECTION REPORT FORM

Date: July 10, 2012	Licensee Rep. Alexandre Gauthier- Environmental Technician
Licensee: Agnico-Eagle Mines Ltd.	Licence No: 2BB-MEL0914

Comments: A compliance inspection was completed on the Meliadine Gold Project, Meliadine West property. The Environmental Technician, Alexandre Gauthier, accompanied the Inspector around the old and new sites.

WATER SUPPLY

Source(s): Meliadine Lake	Quantity used: Unknown		
Owner/Operator: Agnico-Eagle Mines Ltd.			
Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected			
Intake Facilities: A	Storage Structure: A	Treatment Systems: A	Chemical Storage: NI
Flow Meas. Device: A	Conveyance Lines: A	Pumping Stations: A	Screen : NI

Comments: The Inspector noted during the inspection

- The potable water is pumped from Meliadine Lake to camp facilities
- The water is treated using UV and a carbon filter system
- A chlorine pump and tank was housed in the treatment facility but was inactive during the inspections. It was noted that bottles of Chlorax Bleach were found in pumping station.
- Signage and safety equipment were available for personnel during chlorination treatment
- Daily sampling was not available for review during inspection

WASTE DISPOSAL

Sewage: Sewage Treatment System: BIODISK Sewage Treatment Plant (STP)

Natural Water Body: NA	Continuous Discharge (land or water): Land	
Seasonal Discharge: NA	Wetlands Treatment: U Trench: None	
Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected		
Discharge Quality: NI	Decant Structure: NA	Erosion: U
Discharge Meas. Device: NI	Dyke Inspection: NA	Seepages: NA
Dams, Dykes: U	Freeboard: NA	Spills: NA
Construction: NI	O&M Plan: NI	A&R Plan: NI
Periods of Discharge: Contin.	Effluent Discharge Rate: None	

Comments: The Inspector noted at the time of the inspection

- Sewage is fed from flow managing reservoir within the camp facilities into the BIODISK STP
- A second BIODISK is active onsite
- The sewage is then treated with UV and is sent to a settling tank outside of the STP
- Sampling results of treated sewage were available for review
- The treated sewage is then gravity fed from settling tanks to outfall location
- The treated sewage then navigates through a myriad of tiers towards the adjacent water body
- Little information was available on the construction of the tiers or lattice structure which was put in place to retain the waste water (treated sewage, grey water) for additional treatment before entering the environment.
- The grey water from the kitchen is fed through a grease trap and is not treated through the STP system.
- An outfall for the showers was located near camp facilities and another outfall for kitchen water was located near STP final settling tank. It was noted that some freezing issues from the winter had caused the pipes from the showers to crack. Reasonably, it is mid July and the location of the showers outfall does not direct grey water to a sump which is required within the water license. Before the end of the season an appropriate Plan for grey water should be developed. Immediately however direct discharge to the environment must stop.
- Sludge is cleaned out daily from the STP. Barrels of sludge are stored onsite, a sludge management plan was not available for review on site and is to be submitted to the Inspector within 30 days.

Solid Waste:

Owner/Operator:

Landfill: NA	Burn & Landfill: NA	Other: Recycling Facility
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Comments: The Inspector noted at the time of the inspection

- All domestic waste is burned onsite in an incinerator.
- The newly installed incinerator was offline during the inspection
- The old incinerator was running and dark brown smoke was leaving the flue accompanied with bursts of ash

Recycling Facility

- Material is sorted into bins around site
- All bins have been retrofitted with wildlife proof latches

Indian and Northern Affairs Canada Affaires Indiennes et du Nord Canada

- Materials are then sorted again at the facility
- Inspector was informed that the licensee is looking at policing the facility to ensure correct placement of material.
- Approved wood is being burned in an open pit at recycling site

FUEL STORAGE: **Owner/Operator: Agnico-Eagle Mines Ltd**
Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Berms & Liners: A	Water within Berms: U	Evidence of Leaks: A
Drainage Pipes: U	Pump Station & Catchments Berm: U	
Pipeline Condition: NI	Condition of Tanks: NI	

Comments: The Inspector noted during the inspection

- One fuel transfer station found by the fuel farm had secondary containment, the helicopter, drill staging sites both require secondary containment
- Spill kits at fuel farm where not found in plain sight, the Inspector recommends a sign be posted on the sea can which houses this material and updates be made to site map to include this location
- All secondary containment basins require carbon filter to ensure treatment of water and allow for drainage as many were noted to be filled substantially. This is to be addressed within 30 days and a report sent to the Inspector.

Hazardous Materials

- Secondary containment was required for fuel storage around site
- Garages had drip trays, labelled drums, and appropriate safety equipment for hazardous materials
- New hazardous material management systems within facilities that generate this type of waste are being implemented (labelled drums which allow for sorting – Aerosols, filters, batteries-)
- Some pails of hazardous materials stored outside of secondary containment
- Lined berms and sea cans house hazardous materials, there was no record of hazardous materials being shipped offsite. It is best practice to send waste off as generated during that year of operation.

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected		Owner /Operator: Agnico-Eagle Mines Ltd.
0		INAC: Leachate, Potable, Outfall (effluent)
Signs Posted	SNP:	Warning: Signage at Potable and Effluent Outfall
Records & Reporting: 2011 Annual Report submitted		
Geotechnical Inspection: NA		

Non-Compliance of Act or Licence:

- Failure to provide sufficient Secondary containment for all fuel storage at camp and drill locations, as well as carbon filter drains to allow for treatment and removal of contact water
- Failure to properly manage the effluent and grey water outfalls from camp contrary to Part D item 14. *The Licensee shall discharge Waste in a manner to minimize surface erosion.*

The Licensee is reminded that the following items are to be submitted to the Inspector within 30 days;

1. Sludge Management Plan
2. Total Water Volumes (Camp and drill usage)
3. Proof of sufficient Secondary Containment at storage and fuel transfer locations at camp and drill sites on the property

The licensee continues to develop their operations and make steps towards compliance.

Christine Wilson
Inspector's Name

Sent by E-mail Original on File
Inspector's Signature

Andrew Kelm- A/Manager Field Operations
Phyllis Beaulieu – Manager Licensing- Nunavut Water Board

Contact Information:
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Christine.Wilson@aandc.gc.ca



July 20, 2012

STOP WORK ORDER

AGNICO EAGLE MINES LIMITED – COMMERCIAL LEASE KVCL102J168, LAND USE LICENCE No. KVL308C07, LAND USE LICENCE No. KVL100B195, LAND USE LICENCE No. KVL302C268, TIRIGANIAQ QUARRY No. KVCA07Q08.

NOTICE IS HEREBY GIVEN that Agnico Eagle Mines is hereby directed to immediately stop all activities permitted by the above-noted lease, until further notice.

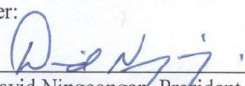
Failure to comply immediately with this directive and with all provisions of the lease will result in default proceedings being taken under the lease including, without limitation, termination of the lease.

Interference with the migration of caribou has been on-going, despite requests to cease. Measures to prevent further and future infractions must be put in place, along with other measures which address the effects of Agnico Eagle Mines' actions.

Please immediately contact Mr. Luis Manzo to discuss measures which must be taken before activities may resume under the lease.

KIVALLIQ INUIT ASSOCIATION

Per:



David Ningeongan, President.

Copy: Nunavut Impact Review Board
Attention:
Government of Nunavut Department of Environment
Attention:

Appendix C

Grey water treatment report and wildlife audit's report

Appendix D

Spill management plan was updated October 2012