

Water Quality 2016

7.1 Water Quality Objectives for EPCOR

2016

Parameter	Approval Requirement	EPCOR Internal Limit	EPCOR Target
Turbidity (NTU)			
Individual Filters	<0.3	<0.1 (2)	<0.08
Distribution System	< 5 (3)	< 1 (1)	< 1
Distribution System (Maintenance)	< 5 (3)	< 3 (1)	< 1
Colour (TCU)	<15 (3)	<10 (1)	<3
pH (25°C)	6.5 - 8.5	7.3 - 8.3 (1)	7.4 - 8.0
Taste and Odour	Inoffensive (3)	Inoffensive (1)	Inoffensive
E.coli (PA/100 mL)	absent	absent (1)	absent
Total Coliforms (PA/100 mL)	absent	absent (1)	absent
Total Chlorine Residual (mg/L)			
Water Treatment Plant Effluent	>1.0	1.3 - 2.4 (2)	1.9 - 2.2
Reservoirs	>0.5	1.0 - 2.4 (1)	1.2 - 2.2
Distribution	>0.5 (4)	1.0 - 2.4 (1)	1.0 - 2.2
Fluoride: (mg/L)			
Reservoir Effluent	0.5 - 0.9	0.6 - 0.8 (1)	0.6 - 0.8
Trihalomethanes (mg/L)			
Reservoir Effluent	<0.100	<0.050 (1)	<0.040
Distribution System	<0.100	<0.050 (1)	<0.040
UV254 % Transmittance			
E.L. Smith		>89% (2)	>90%
Rossdale		>87% (2)	>88%
HAA (mg/L)			
Reservoir Effluent	< 0.080	< 0.040 (1)	<0.035
Distribution System	< 0.080	< 0.040 (1)	<0.035
NDMA (mg/L):			
Reservoir Effluent	< 0.000040	< 0.000010 (1)	<0.000005
Distribution System	< 0.000040	< 0.000010 (1)	
Microorganism Log Removal at			
<i>Giardia</i>	≥5.5	≥6.0 (2)	>6.5
<i>Cryptosporidium</i>	≥5.5	≥5.3 (2)	>6.0
Virus	≥4.0	≥4.5 (2)	>5.0

(1) Limit based on City of Edmonton Performance Based Rate (PBR) agreement

(2) Limit based on EPCOR Action Level

(3) Aesthetic Objective

(4) in 75% of samples collected in a day

All values are expressed in units of mg/L unless otherwise stated.

Based on Dec 13, 2013 Summary of Epcor Edmonton Water Quality Standards.

**7.2 SUMMARY OF MAJOR CHEMICALS, MICROBIOLOGICAL, AND PHYSICAL
PARAMETERS OF EDMONTON DRINKING WATER PRODUCED
AT THE WATER TREATMENT PLANTS**

2016

Parameter	Unit	MAC*	Average	Median	Min	Max	Count
Alkalinity, total	mg CaCO ₃ /L		137	117	84	156	732
Aluminum	mg/L	(0.1/0.2)	0.035	0.040	0.019	0.108	24
Arsenic	mg/L	0.01	<0.0002	<0.0002	<0.0002	0.0004	24
Bromate, dissolved	mg/L	0.01	<0.005	<0.005	<0.005	<0.005	198
Bromodichloromethane	ug/L		0.5	0.6	<0.5	2.2	731
Cadmium	mg/L	0.005	<0.0001	<0.0001	<0.0001	<0.0001	24
Chlorate, dissolved	mg/L	1	0.13	0.13	<0.10	0.48	198
Chloride, dissolved	mg/L		6.03	5.80	3.94	11.2	198
Chlorine, total	mg/L	3.0	2.16	2.02	1.54	2.41	733
Chlorite, dissolved	mg/L	1	<0.005	<0.005	<0.005	0.200	198
Chromium	mg/L	0.05	<0.0002	<0.0002	<0.0002	<0.0002	24
Colour	TCU	(15)	<1	<1	<1	2	732
Conductivity	uS/cm		430	399	333	544	107
Copper	mg/L	(1)	0.003	<0.002	<0.002	0.003	24
Cryptosporidium	oocysts/100L		<0.1	<0.1	<0.1	0.1	27
Fluoride, dissolved	mg/L	1.5	0.69	0.69	0.58	0.80	732
Giardia	cysts/100L		<0.1	<0.1	<0.1	<0.1	27
Haloacetic Acids, total (HAA5)	ug/L		17.2	20.4	11.1	38.0	24
Hardness, Calcium	mg CaCO ₃ /L		124	118	83	199	732
Hardness, total	mg CaCO ₃ /L		194	177	148	258	732
Iron	mg/L	(0.3)	<0.002	<0.002	<0.002	0.002	24
Lead	mg/L	0.01	<0.0001	<0.0001	<0.0001	<0.0001	24
Manganese	mg/L	(0.05)	<0.002	<0.002	<0.002	0.005	24
Mercury	mg/L	0.001	0.0001	<0.0001	<0.0001	0.0002	24
NDMA	ng/L	40	<0.7	<1.6	<1.6	5.2	24
Nitrate (as N), dissolved	mg/L	10	0.08	0.03	<0.01	0.21	198
Nitrite (as N), dissolved	mg/L	1	<0.01	<0.01	<0.01	<0.01	198
pH	N/A	(6.5–10.5)	7.8	7.8	7.0	8.3	732
Potassium	mg/L		0.72	0.73	0.54	1.62	24
Sodium	mg/L	(200)	10.0	10.5	5.7	32.8	24
Sulphate, dissolved	mg/L		74	76.7	39.1	157	198
Total Dissolved Solids	mg/L		236	240	205	321	24
Total Organic Carbon	mg/L C		1.8	1.8	0.6	3.6	104
Trihalomethanes	ug/L	<100	8.9	12.1	3.0	31.4	731
Turbidity	NTU		0.07	0.07	0.05	0.14	732
Uranium	mg/L	0.02	<0.0005	<0.0005	<0.0005	<0.0005	24
Zinc	mg/L	(5)	<0.002	<0.002	<0.002	0.005	24

Bacteriological Data

Coliforms, total	PA/100 mL	62	Absent	Absent	Absent	734
E. coli	PA/100 mL	62	Absent	Absent	Absent	734

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development Approval Limit. Limits in brackets indicates an aesthetic objective or operational guideline.

7.3 SUMMARY OF LABORATORY ANALYSIS

Testing of the Edmonton Drinking Water

2016

Drinking Water Testing

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
Water Treatment Plant	# Tests	7,603	7,194	7,812	7,354	7,697	7,455	7,601	7,634	7,458	7,592	7,439	7,652	90,491
	# Samples	338	326	460	348	355	334	334	347	344	330	336	351	4,203
Field Reservoirs	# Tests	720	715	780	700	720	780	715	780	861	942	770	720	9,203
	# Samples	48	47	60	44	48	60	47	60	48	50	58	48	618
Routine Distribution System	# Tests	1,283	1,172	1,159	1,262	1,182	1,147	1,244	1,177	1,272	1,223	1,183	1,148	14,452
	# Samples	169	164	162	166	166	159	160	165	167	156	163	162	1,959
System Depressurization/Repair	# Tests	184	200	361	398	306	366	400	429	369	266	220	432	3,931
	# Samples	46	50	70	73	76	92	100	106	92	67	55	75	902
Customer Complaints	# Tests	534	603	834	969	834	707	537	475	774	1,104	1,196	435	9,002
	# Samples	11	12	16	17	20	17	11	13	18	24	24	9	192
Externally Contracted Analyses	# Tests	972	202	232	964	204	228	202	204	204	208	224	202	4,046
	# Samples	106	101	116	102	102	114	101	102	102	104	112	101	1,263
Total	# Tests	11,296	10,086	11,178	11,647	10,943	10,683	10,699	10,699	10,938	11,335	11,032	10,589	131,125
	# Samples	718	700	884	750	767	776	753	793	771	731	748	746	9,137

Additional Testing

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
New Watermain Testing	# Tests	5	35	55	80	10	30	62	60	35	80	205	165	822
	# Samples	1	7	11	16	2	6	12	12	7	16	41	33	164
Water Treatment Plant Waste Discharge	# Tests	16	16	20	16	20	18	16	16	20	16	20	21	215
	# Samples	4	4	5	4	5	5	4	4	5	4	5	6	55
Quality Control	# Tests	8,202	8,420	8,183	9,092	8,619	8,445	8,618	8,580	8,184	8,329	8,073	8,447	101,192
	# Samples	137	131	150	131	123	127	142	142	130	121	131	134	1,599
Total	# Tests	8,223	8,471	8,258	9,188	8,649	8,493	8,696	8,656	8,239	8,425	8,298	8,633	102,229
	# Samples	142	142	166	151	130	138	158	158	142	141	177	173	1,818

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
Grand Total	# Tests	19,760	19,483	19,466	21,777	20,303	19,910	19,442	19,417	19,946	20,516	19,872	19,996	239,888
	# Samples	724	712	901	771	775	788	770	810	784	752	795	786	9,368

7.4 Bacteriological Data: Water Treatment Plants

2016

Treated Water Entering the Distribution System

	# of +ve Samples		# of Samples		Limit	Required Frequency - Each Plant*	Unit
	Rossdale	E.L. Smith	Rossdale	E.L. Smith	GCDWQ or Approval		
Coliforms, total	0	1**	366	368	0/100 mL	[daily]	PA/100 mL
E. coli	0	1**	366	368	0/100 mL	[daily]	PA/100 mL
Heterotrophic Plate Count	5	10	366	367	N/A	[daily]	CFU/mL

Water Entering the Plant Reservoir

	# of +ve Samples		# of Samples		Limit	Required Frequency - Each Plant*	Unit
	Rossdale	E.L. Smith	Rossdale	E.L. Smith	GCDWQ or Approval		
Coliforms, total	0	0	365	368	N/A	[daily]	PA/100 mL
E. coli	0	0	365	368	N/A	[daily]	PA/100 mL
Heterotrophic Plate Count	5	3	365	367	N/A	[daily]	CFU/mL

Raw River Water Entering the Treatment Plants

	Rossdale			E.L. Smith			Rossdale	E.L. Smith	Limit	Required Frequency - Each Plant*	Unit
	Mean	Min	Max	Mean	Min	Max	# of Samples		GCDWQ or Approval		
Coliforms, total	2,425	30	160,000	5,069	28	240,000	365	54	N/A	[weekly]	PA/100 mL
E. coli	148	<1	7,500	174	<1	6,100	365	54	N/A	[weekly]	PA/100 mL
Heterotrophic Plate Count	1,868	86	8,500	753	49	4,200	12	12	N/A	[monthly]	CFU/mL

* Indicates EPCOR Operations Program.

** January - Incorrect sampling procedure produced a false positive *E.coli* result

7.5 Bacteriological Data: Distribution System

2016

	Coliforms, total			E. coli			HPC		
	Count	# +ve	% +ve	Count	# +ve	% +ve	Count	# +ve	% +ve
January									
FIELD DISTRIBUTION WATER	115	0	0.0	115	0	0.0	115	9	7.8
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	48	0	0.0	48	0	0.0	48	1	2.1
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	217	0	0.0	217	0	0.0	163	10	6.1
February									
FIELD DISTRIBUTION WATER	110	0	0.0	110	0	0.0	110	1	0.9
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	47	0	0.0	47	0	0.0	47	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	47	0	0.0	47	0	0.0	0		0.0
Monthly	211	0	0.0	211	0	0.0	157	1	0.6
March									
FIELD DISTRIBUTION WATER	107	0	0.0	107	0	0.0	107	2	1.9
FIELD DISTRIBUTION WATER - PLPH	55	0	0.0	55	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	60	0	0.0	60	0	0.0	60	2	3.3
RESERVOIR WATER - PLPH (duplicate-not counted)	59	0	0.0	59	0	0.0	0		0.0
Monthly	224	0	0.0	224	0	0.0	167	4	2.4
April									
FIELD DISTRIBUTION WATER	110	0	0.0	110	0	0.0	110	1	0.9
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	44	0	0.0	44	0	0.0	44	2	4.5
RESERVOIR WATER - PLPH (duplicate-not counted)	44	0	0.0	44	0	0.0	0		0.0
Monthly	208	0	0.0	208	0	0.0	154	3	1.9
May									
FIELD DISTRIBUTION WATER	112	1	0.9	112	0	0.0	112	4	3.6
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	48	0	0.0	48	0	0.0	48	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	214	1	0.5	214	0	0.0	160	4	2.5

Guidelines for Canadian Drinking Water Quality recommend 178 bacteriological samples for a city the size of Edmonton. HPC are not required.

Testing conducted by Provincial Laboratory for Public Health labelled with PLPH.

All Total Coliform positive events were investigated by re-sampling according to the AEP Bacteriological Response protocol and were resolved.

7.5 Bacteriological Data: Distribution System

2016

	Coliforms, total			E. coli			HPC		
	Count	# +ve	% +ve	Count	# +ve	% +ve	Count	# +ve	% +ve
June									
FIELD DISTRIBUTION WATER	105	0	0.0	105	0	0.0	105	3	2.9
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	60	0	0.0	60	0	0.0	60	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	60	0	0.0	60	0	0.0	0		0.0
Monthly	219	0	0.0	219	0	0.0	165	3	1.8
July									
FIELD DISTRIBUTION WATER	108	0	0.0	108	0	0.0	108	9	8.3
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	47	0	0.0	47	0	0.0	47	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	47	0	0.0	47	0	0.0	0		0.0
Monthly	209	0	0.0	209	0	0.0	155	9	5.8
August									
FIELD DISTRIBUTION WATER	111	1	0.9	111	0	0.0	111	8	7.2
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	60	0	0.0	60	0	0.0	60	1	1.7
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	225	1	0.4	225	0	0.0	171	9	5.3
September									
FIELD DISTRIBUTION WATER	109	0	0.0	109	0	0.0	108	0	0.0
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	48	0	0.0	48	0	0.0	48	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	211	0	0.0	211	0	0.0	156	0	0.0
October									
FIELD DISTRIBUTION WATER	104	0	0.0	104	0	0.0	103	2	1.9
FIELD DISTRIBUTION WATER - PLPH	54	0	0.0	54	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	48	0	0.0	48	0	0.0	48	1	2.1
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	208	0	0.0	208	0	0.0	151	3	2.0

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7.5 Bacteriological Data: Distribution System

2016

	Coliforms, total			E. coli			HPC		
	Count	# +ve	% +ve	Count	# +ve	% +ve	Count	# +ve	% +ve
November									
FIELD DISTRIBUTION WATER	109	0	0.0	109	0	0.0	109	3	2.8
FIELD DISTRIBUTION WATER - PLPH	52	0	0.0	52	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	58	0	0.0	58	0	0.0	58	3	5.2
RESERVOIR WATER - PLPH (duplicate-not counted)	58	0	0.0	58	0	0.0	0		0.0
Monthly	221	0	0.0	221	0	0.0	167	6	3.6
December									
FIELD DISTRIBUTION WATER	108	0	0.0	108	0	0.0	108	9	8.3
FIELD DISTRIBUTION WATER - PLPH	51	0	0.0	51	0	0.0	0		0.0
OUTSIDE LAB ANALYSIS	2	0	0.0	2	0	0.0	0		0.0
RESERVOIR WATER	48	0	0.0	48	0	0.0	48	0	0.0
RESERVOIR WATER - PLPH (duplicate-not counted)	48	0	0.0	48	0	0.0	0		0.0
Monthly	209	0	0.0	209	0	0.0	156	9	5.8
Year to Date	2,576	2	0.1	2,576	0	0.0	1,922	61	3.2

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7.5 Bacteriological Data: Distribution System

2016

Samples from Depressurizations

	Coliforms, total			E. coli			Heterotrophic Plate Count		
	Count	# +ve	% +ve	Count	# +ve	% +ve	Count	# +ve	% +ve
January	46	0	0.0	46	0	0.0	0	0	0.0
February	50	0	0.0	50	0	0.0	0	0	0.0
March	70	0	0.0	70	0	0.0	0	0	0.0
April	72	0	0.0	72	0	0.0	0	0	0.0
May	76	1	1.3	76	0	0.0	2	0	0.0
June	91	0	0.0	91	0	0.0	0	0	0.0
July	100	1	1.0	100	0	0.0	0	0	0.0
August	106	4	3.8	106	0	0.0	5	0	0.0
September	92	2	2.2	92	1	1.1	1	0	0.0
October	66	1	1.5	66	0	0.0	0	0	0.0
November	55	0	0.0	55	0	0.0	0	0	0.0
December	75	0	0.0	75	0	0.0	0	0	0.0
YTD	899	9	1.0	899	1	0.1	8	0	0.0

Samples from Complaints

	Coliforms, total			E. coli			Heterotrophic Plate Count		
	Count	# +ve	% +ve	Count	# +ve	% +ve	Count	# +ve	% +ve
January	11	0	0.0	11	0	0.0	11	0	0.0
February	12	0	0.0	12	0	0.0	12	0	0.0
March	16	0	0.0	16	0	0.0	16	0	0.0
April	17	0	0.0	17	0	0.0	17	0	0.0
May	19	0	0.0	19	0	0.0	19	0	0.0
June	16	0	0.0	16	0	0.0	16	0	0.0
July	11	0	0.0	11	0	0.0	11	1	9.1
August	13	0	0.0	13	0	0.0	13	0	0.0
September	18	0	0.0	18	0	0.0	17	1	5.9
October	24	1	4.2	24	0	0.0	24	2	8.3
November	24	0	0.0	24	0	0.0	24	1	4.2
December	9	0	0.0	9	0	0.0	9	0	0.0
YTD	190	1	0.5	190	0	0.0	189	5	2.6

All Total Coliform and E.coli positive samples were followed up on according to the AEP bacteriological response protocol.

7.6 Giardia and Cryptosporidium

2016

Treated Water entering the distribution system

	<i>Cryptosporidium</i>		<i>Giardia</i>	
	oocysts/100L		cysts/100L	
	E.L. Smith	Rossdale	E.L. Smith	Rossdale
4 - Jan	<0.1	<0.1	<0.1	<0.1
1 - Feb	<0.1	<0.1	<0.1	<0.1
7 - Mar	<0.1	<0.1	<0.1	<0.1
4 - Apr	<0.1	<0.1	<0.1	<0.1
2 - May	<0.1	<0.1	<0.1	<0.1
6 - Jun	<0.1	<0.1	<0.1	<0.1
4 - Jul	0.1	<0.1	<0.1	<0.1
15 - Jul	<0.1		<0.1	
8 - Aug	<0.1	<0.1	<0.1	<0.1
12 - Sep	<0.1	<0.1	<0.1	<0.1
11 - Oct	<0.1		<0.1	
13 - Oct		<0.1		<0.1
14 - Nov	<0.1	<0.1	<0.1	<0.1
5 - Dec	<0.1	<0.1	<0.1	<0.1
27 - Dec	<0.1	<0.1	<0.1	<0.1

Water entering plant reservoir

	<i>Cryptosporidium</i>		<i>Giardia</i>	
	oocysts/100L		cysts/100L	
	E.L. Smith	Rossdale	E.L. Smith	Rossdale
11 - Jan	<0.1	<0.1	<0.1	<0.1
25 - Jan	<0.1	<0.1	<0.1	<0.1
8 - Feb	<0.1	<0.1	<0.1	<0.1
22 - Feb	<0.1	<0.1	<0.1	<0.1
29 - Feb	<0.1		<0.1	
15 - Jul	<0.1		<0.1	
29 - Aug	<0.1		<0.1	
19 - Sep	<0.1		<0.1	
30 - Nov	<0.1		<0.1	
21 - Dec		<0.1		<0.1
27 - Dec	<0.1	<0.1	<0.1	<0.1

7.6 Giardia and Cryptosporidium

2016

Raw Water

	<i>Cryptosporidium</i>		<i>Giardia</i>	
	oocysts/100L		cysts/100L	
	E.L. Smith	Rossdale	E.L. Smith	Rossdale
11 - Jan	<0.8	<0.6	3.2	6.8
25 - Jan	<0.6	<0.5	1.2	5.7
8 - Feb	<0.8	<2.5	3.4	5.0
22 - Feb	<1.5	2.9	3.1	<2.9
29 - Feb	<0.9		0.9	
7 - Mar	<2.1	<1.0	4.1	17
4 - Apr	<41		41	
14 - Apr		<3.3		13
2 - May	<1.0	<1.1	<1.0	3.4
6 - Jun	<2.5	<6.1	7.4	12
4 - Jul	<1.6	<2.1	<1.6	<2.1
8 - Aug	<5.4	10	38	15
15 - Aug	5.0		15	
22 - Aug	8.0		110	
26 - Aug		<150		440
29 - Aug	<51		100	
6 - Sep	<13	6.4	<13	13
12 - Sep	<6.6	8.3	26	29
19 - Sep	<4.7	<18	140	130
26 - Sep	<7.4	4.8	7.4	65
3 - Oct	<4.4	<3.6	120	220
11 - Oct	<4.2		160	
13 - Oct		4.0		100
17 - Oct	<1.7	1.6	99	94
24 - Oct	<1.7	1.9	76	90
31 - Oct	<1.4	1.2	79	49
7 - Nov	1.4	<1.9	83	100
14 - Nov	1.1	<1.1	51	84
21 - Nov	<1.4	1.1	56	120
28 - Nov	<1.3	<1.6	41	44
5 - Dec	<2.3	<1.4	6.9	1.4
12 - Dec		<1.0		4.0
13 - Dec	<1.0		3.0	
19 - Dec	<1.0		2.0	
20 - Dec		<0.9		0.9
27 - Dec	<1.0	2.1	1.0	4.1

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Physical										
Colour (TCU)	<1	<1	2	366	<1	<1	2	366	(15)	10
Conductivity (uS/cm)	399	345	501	53	413	333	544	54		
FPA-Intensity (N/A)	0.67	0.25	1.69	66	0.67	0.38	1.44	65		
pH (N/A)	7.8	7.0	8.3	366	7.7	7.1	8.0	366	(6.5–8.5)	7.3-8.3
Total Dissolved Solids (mg/L)	242	205	297	12	251	211	321	12	(500)	
Turbidity (NTU)	0.07	0.05	0.12	366	0.07	0.05	0.14	366		1
UV 254 %T	95	87	98	366	95	87	98	366		
Primary Inorganics (mg/L) **										
Antimony	<0.0002	<0.0002	0.0003	12	<0.0002	<0.0002	0.0003	12	0.006	
Arsenic	0.0003	<0.0002	0.0004	12	0.0002	<0.0002	0.0004	12	0.01	
Barium	0.063	0.054	0.072	12	0.062	0.054	0.076	12	1	
Boron	0.009	0.007	0.012	12	0.009	0.007	0.014	12	5	
Bromate, dissolved	<0.005	<0.003	<0.005	99	<0.005	<0.003	<0.005	99	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.005	
Chlorate, dissolved	0.142	<0.092	0.477	99	0.145	<0.053	0.255	99	1	
Chlorine, total	2.04	1.62	2.41	366	2.03	1.54	2.39	367	0.5 - 3.0	1.0 -2.4
Chlorite, dissolved	<0.007	<0.005	<0.200	98	<0.007	<0.005	<0.200	99	1	
Chromium	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12	0.05	
Cyanide, dissolved	<0.002	<0.002	<0.002	12	<0.002	<0.002	0.003	12	0.2	
Fluoride, dissolved	0.68	0.58	0.78	366	0.69	0.61	0.80	366	0.5-0.9	0.6–0.8
Lead	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.01	
Mercury	<0.0001	<0.0001	0.0002	12	<0.0001	<0.0001	0.0002	12	0.001	
Nitrate (as N), dissolved	0.04	<0.01	0.21	99	0.04	<0.01	0.15	99	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	99	<0.005	<0.005	<0.005	99	1	
Selenium	0.0002	<0.0002	0.0003	12	0.0002	<0.0002	0.0003	12	0.01	
Uranium	<0.0005	<0.0005	<0.0005	12	<0.0005	<0.0005	<0.0005	12	0.02	

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Primary Organics (ug/L) **										
2,4-D	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	100	
Atrazine	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	5	
Benzene	<0.5	<0.1	<0.5	369	<0.5	<0.1	<0.5	370	5	
Benzo(a)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4	0.01	
Bromoxynil	<0.006	<0.005	0.008	4	0.007	<0.005	0.011	4	5	
Carbon Tetrachloride	<1.0	<0.03	<1.0	370	<1.0	<0.03	<1.0	371	2	
Chlorobenzene	<0.5	<0.03	<0.5	369	<0.5	<0.03	<0.5	370	80 (30)	
Chlorpyrifos	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	90	
Diazinon	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	20	
Dicamba	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	120	
Dichlorobenzene (1,2)	<0.5	<0.03	<0.5	369	<0.5	<0.03	<0.5	370	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.1	<0.5	369	<0.5	<0.1	<0.5	370	5 (1)	
Dichloroethane (1,2)	<0.2	<0.1	<0.5	6	<0.2	<0.1	<0.5	6	5	
Dichloroethylene (1,1)	<3.0	<0.2	<3.0	369	<3.0	<0.2	<3.0	370	14	
Dichlorophenol (2,4)	<0.06	<0.01	<0.10	4	<0.06	<0.01	<0.10	4	900 (0.3)	
Diclofop-methyl	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4	9	
Dimethoate	<0.016	<0.005	<0.050	4	<0.028	<0.005	<0.050	4	20	
Diuron	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4	150	
Ethyl benzene	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2		
Ethylbenzene	<0.5	<0.5	<0.5	367	<0.5	<0.50	<0.5	368	(2.4)	
Glyphosate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4	280	
Haloacetic Acids, (HAA5)	20.9	11.5	36.6	12	20.9	11.1	38.0	12	80	40
Malathion	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4	190	
MCPA	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	100	
Methylene Chloride	<0.5	<0.4	<0.5	369	<0.5	<0.4	<0.5	370	50	
Metolachlor	<0.009	<0.005	<0.012	4	<0.010	<0.005	<0.012	4	50	
Metribuzin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4	80	
Microcystin	<0.16	<0.10	<0.50	7	<0.16	<0.10	<0.50	7		
Microcystin LR	<0.15	<0.15	<0.15	2	<0.15	<0.15	<0.15	2		
NDMA (ng/L)	2.17	<0.95	5.20	12	<1.54	<0.50	4.00	12	40	10
NTA (mg/L)	<0.2	<0.1	<0.2	5	<0.2	<0.1	<0.2	5	0.4	
Pentachlorophenol	<0.5	<0.1	<0.6	4	<0.5	<0.1	<0.6	4	60 (30)	
Phorate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	2	
Picloram	<0.014	<0.005	<0.022	4	<0.018	<0.005	<0.022	4	190	
Simazine	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4	10	
Terbufos	<0.03	<0.03	<0.03	4	<0.03	<0.03	<0.03	4	1	
Tetrachloroethylene	<0.5	<0.1	<0.5	370	<0.5	<0.1	<0.5	371	10	
Tetrachlorophenol (2,3,4,6)	<0.3	<0.1	<0.4	4	<0.3	<0.1	<0.4	4	100 (1)	
Toluene	<0.5	<0.03	<0.5	369	<0.5	<0.03	<0.5	370	(24)	
Trichloroethylene	<0.5	<0.2	<0.5	370	<0.5	<0.2	<0.5	371	5	
Trichlorophenol (2,4,6)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4	5 (2)	
Trifluralin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	45	
Trihalomethanes	14.3	3.6	31.4	368	12.8	3.0	28.0	369	100	50
Vinyl Chloride	<0.4	<0.1	<1.0	6	<0.4	<0.1	<1.0	6	2	
Xylenes	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2	90 (20)	

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

										Limits	
		ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
		Mean	Min	Max	Count	Mean	Min	Max	Count		
Radionuclides Bq/L											
	Cesium-137	<0.20	<0.20	<0.20	2	<0.20	<0.20	<0.20	2	10	
	Gross Alpha	<0.12	<0.12	<0.12	2	<0.12	<0.12	<0.12	2	(0.5)	
	Gross Beta	<0.11	<0.10	0.11	2	<0.10	<0.10	<0.10	2	(1.0)	
	Iodine-131	<0.30	<0.30	<0.30	2	<0.30	<0.30	<0.30	2	6	
	Lead-210	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2	0.2	
	Radium-226	<0.01	<0.01	0.01	2	0.01	<0.01	0.01	2	0.5	
	Strontium-90	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2	5	
	Tritium	<15	<15	<15	2	20	<15	25	2	7000	
Secondary Inorganics (mg/L) ***											
	Alkalinity, total (mg CaCO3/L)	117	84	156	366	120	102	154	366		
	Aluminum	0.052	0.019	0.108	12	0.051	0.022	0.094	12	(0.1/0.2)	0.1/0.2
	Ammonia as N	0.13	0.10	0.19	54	0.13	0.07	0.26	55		
	Beryllium	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
	Bromide, dissolved	<0.005	<0.005	<0.020	99	<0.005	<0.005	<0.020	99		
	Calcium	46.2	43.1	49.2	12	46.0	41.6	49.7	12		
	Chloride, dissolved	5.6	3.9	11.2	99	6.2	4.1	9.2	99	(250)	
	Chlorine, free	<0.03	<0.03	<0.03	97	<0.03	<0.03	<0.03	92		
	Cobalt	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
	Copper	<0.002	<0.002	<0.002	12	<0.002	<0.002	0.003	12	(1)	
	Hardness, Ca (mg CaCO3/L)	119	83	199	366	119	85	185	366		
	Hardness, total (mg CaCO3/L)	178	156	258	366	179	148	233	366		
	Iron	<0.002	<0.002	0.002	12	<0.002	<0.002	<0.002	12	(0.3)	0.3
	Lithium	0.0033	0.0027	0.0042	12	0.0031	0.0026	0.0038	12		
	Magnesium	13.4	11.6	15.0	12	13.3	11.4	15.0	12		
	Manganese	<0.002	<0.002	<0.002	12	<0.002	<0.002	0.005	12	(0.05)	
	Molybdenum	0.0008	0.0006	0.0010	12	0.0007	0.0006	0.0009	12		
	Nickel	0.0005	0.0003	0.0007	12	0.0005	0.0003	0.0008	12		
	Phosphate, Ortho (as P)	<0.02	<0.02	<0.02	12	<0.02	<0.02	<0.02	12		
	Phosphorus	0.03	<0.01	0.04	12	0.03	<0.01	0.04	12		
	Potassium	0.78	0.56	1.30	12	0.80	0.54	1.62	12		
	Silicon	1.87	1.28	3.02	12	1.88	1.24	3.00	12		
	Silver	<0.0002	<0.0002	0.0004	12	<0.0002	<0.0002	0.0004	12		
	Sodium	11.4	5.7	25.0	12	14.8	5.8	32.8	12	(200)	
	Strontium	0.427	0.314	0.524	12	0.418	0.312	0.471	12		
	Sulphate, dissolved	76.5	39.1	136.0	99	80	44.8	157.0	99	(500)	
	Sulphide	<0.002	<0.002	<0.002	12	<0.002	<0.002	<0.002	12	(0.05)	
	Thallium	0.0001	<0.0001	0.0003	12	<0.0001	<0.0001	0.0002	12		
	Tin	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
	Titanium	<0.0005	<0.0005	<0.0005	12	<0.0005	<0.0005	<0.0005	12		
	Total Kjeldahl Nitrogen (TKN)	0.34	0.34	0.34	1	0.26	0.26	0.26	1		
	Vanadium	0.0005	0.0003	0.0007	12	0.0004	0.0003	0.0007	12		
	Zinc	<0.002	<0.002	0.005	12	<0.002	<0.002	0.003	12	(5)	
	Zirconium	0.0004	<0.0002	0.0010	12	0.0002	<0.0002	0.0004	12		

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
2,4-DB	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
2,4-Dichlorophenol	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
2,4-DP	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
3-Methylchloranthrene	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
7,12-Dimethylbenz(a)anthracen	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
Acenaphthene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Acenaphthylene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Acetaminophen	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Acetylsalicylic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Acridine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Aldicarb	<0.7	<0.1	<2.0	6	<0.7	<0.1	<2.0	6		
Aldicarb Sulfone	<5	<5	<5	4	<5	<5	<5	4		
Aldicarb Sulfoxide	<2	<2	<2	4	<2	<2	<2	4		
Aldrin	<0.007	<0.005	<0.009	4	<0.008	<0.005	<0.009	4		
alpha-Endosulfan	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Aminocarb	<1	<1	<1	2	<1	<1	<1	2		
Aminomethyl Phosphonic Acid	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Aminopyralid	<0.02	<0.01	<0.03	2	<0.01	<0.01	<0.01	2		
Anthracene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Azinphos-methyl	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Benomyl	<5	<5	<5	2	<5	<5	<5	2		
Bentazon	<0.006	<0.005	<0.006	4	<0.006	<0.005	<0.006	4		
Benzidine	0.3	<0.2	0.6	4	0.3	<0.2	0.7	4		
Benzo(a)anthracene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(b)fluoranthene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Benzo(b,j,k)fluoranthene	<0.02	<0.01	<0.02	4	<0.02	<0.01	<0.02	4		
Benzo(c)phenanthrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(e)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(ghi)perylene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(k)fluoranthene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Benzoylcegonine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Bezafibrate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Bis(2-chloroethoxy)methane	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Bis(2-chloroethyl)ether	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Bis(2-chloroisopropyl)ether	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Bis(2-ethylhexyl)phthalate	<0.3	<0.1	0.4	4	<0.3	<0.1	0.4	4		
Bromacil	<0.030	<0.030	<0.030	4	<0.030	<0.030	<0.030	4		
Bromobenzene	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Bromochloroacetic acid	<2	<2	2	12	<2	<2	<2	12		
Bromodichloromethane	0.8	<0.1	2.2	370	0.7	<0.5	2.0	371		16
Bromoform	<1.0	<0.1	<1.0	370	<1.0	<0.1	<1.0	371		
Bromomethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Bromophenyl phenyl ether (4)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Butylbenzylphthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Caffeine	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Carbamazepine	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Carbaryl	<25	<25	<25	4	<25	<25	<25	4		
Carbathiin	<0.175	<0.100	<0.200	4	<0.175	<0.100	<0.200	4		
Carbofuran	<25	<25	<25	2	<25	<25	<25	2		
Chloramphenicol	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Chloro-2-MethylPhenol (4)	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Chloro-3-methylphenol (4)	<0.6	<0.1	<0.8	4	<0.6	<0.1	<0.8	4		
Chloroethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Chloroethoxyethylene (2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chloroform	13.5	<0.1	30.2	370	12.2	2.7	35.2	371		
Chloromethane	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Chloronaphthalene	<0.2	<0.1	<0.2	2	<0.2	<0.1	<0.2	2		
Chloronaphthalene (2)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Chlorophenol (2)	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Chlorophenyl phenyl ether (4)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Chlorothalonil	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Chlorotoluene (2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chlorotoluene (4)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chrysene	<0.10	<0.00	<0.20	6	<0.10	<0.004	<0.20	6		
Ciprofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Clindamycin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Clodinafop acid metabolite	<0.058	<0.020	<0.070	4	<0.058	<0.020	<0.070	4		
Clodinafop-propargyl	<0.040	<0.040	<0.040	4	<0.040	<0.040	<0.040	4		
Clofibric Acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Clopyralid	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Cocaine	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
Codeine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Cotinine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Cyanazine	<0.055	<0.050	<0.060	4	<0.058	<0.050	<0.060	4		
Desethyl Atrazine	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Desisopropyl Atrazine	<0.065	<0.050	<0.080	4	<0.073	<0.050	<0.080	4		
Dibenzo(a,h)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(a,i)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(a,l)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(ah)anthracene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Dibromo-3-chloropropane (1,2)	<0.8	<0.8	<0.8	2	<0.8	<0.8	<0.8	2		
Dibromoacetic acid	<2	<2	<2	12	<2	<2	<2	12		
Dibromochloromethane	<0.5	<0.04	<0.5	370	<0.5	<0.04	<0.5	371		
Dibromoethane (1,2)	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dibromomethane	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dichloroacetic acid	11	6	20	12	12	6	20	12		
Dichlorobenzene (1,3)	<0.5	<0.03	<0.5	369	<0.5	<0.03	<0.5	370		
Dichloroethane (1,1)	<0.07	<0.07	<0.07	2	<0.07	<0.07	<0.07	2		
Dichloroethylene, cis (1,2)	<0.5	<0.1	<0.5	369	<0.5	<0.1	<0.5	370		
Dichloroethylene, trans (1,2)	<0.5	<0.2	<0.5	369	<0.5	<0.2	<0.5	370		
Dichloropropane (1,2)	<0.5	<0.03	<0.5	369	<0.5	<0.03	<0.5	370		
Dichloropropane (1,3)	<0.04	<0.04	<0.04	2	<0.04	<0.04	<0.04	2		
Dichloropropane (2,2)	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Dichloropropylene (1,1)	<0.06	<0.06	<0.06	2	<0.06	<0.06	<0.06	2		
Dichloropropylene cis (1,3)	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dichloropropylene trans (1,3)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Diclofenac	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Dieldrin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Diethyl phthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Dimethyl phthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Dimethylbenz(a)anthracene (7,12)	<0.008	<0.008	<0.008	2	<0.008	<0.008	<0.008	2		
Dimethylphenol (2,4)	<0.3	<0.2	<0.3	4	<0.3	<0.2	<0.3	4		
Di-n-butylphthalate	<0.3	<0.1	0.3	4	<0.3	<0.1	<0.3	4		
Dinitrophenol (2,4)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4		
Dinitrotoluene (2,4)	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Dinitrotoluene (2,6)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Di-n-octyl phthalate	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Diphenylhydrazine (1,2)	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Disulfoton	<0.200	<0.200	<0.200	4	<0.200	<0.200	<0.200	4		
Enrofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
EPTC	<25	<25	<25	2	<25	<25	<25	2		
Erythromycin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Ethalfuralin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Ethion	<0.10	<0.10	<0.10	4	<0.10	<0.10	<0.10	4		
Ethofumesate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Fenoprofen	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Fenoxaprop-p-ethyl	<0.040	<0.040	<0.040	4	<0.040	<0.040	<0.040	4		
Fluazifop	<0.033	<0.010	<0.040	4	<0.033	<0.010	<0.040	4		
Fluoranthene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Fluorene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Fluoxetine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Fluroxypyr	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Gemfibrozil	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Glufosinate	<0.4	<0.4	<0.4	2	<0.4	<0.4	<0.4	2		
Hexachlorobenzene	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Hexachlorobutadiene	<0.2	<0.1	<0.5	6	<0.2	<0.1	<0.5	6		
Hexachlorocyclopentadiene	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Hexachloroethane	<0.4	<0.3	<0.5	4	<0.4	<0.3	<0.5	4		
Hexaconazole	<0.019	<0.009	<0.050	4	<0.019	<0.009	<0.050	4		
Hydroxy Carbofuran (3)	<25	<25	<25	4	<25	<25	<25	4		
Ibuprofen	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Imazamethabenz-methyl	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Imazamox	<0.012	<0.009	<0.020	4	<0.012	<0.009	<0.020	4		
Imazethapyr	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Indeno(1,2,3-cd)pyrene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Indomethacin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Iprodione	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Isophorone	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Isopropylbenzene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Ketoprofen	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Lincomycin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Lindane (alpha-BHC)	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Lindane (gamma-BHC)	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Linuron	<0.035	<0.020	<0.040	4	<0.035	<0.020	<0.040	4		
MCPB	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
MCPB	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Meclofenamic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Metalaxyl-M	<0.025	<0.010	<0.030	4	<0.025	<0.010	<0.030	4		
Methamphetamine	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Methomyl	<1.8	<0.1	<5.0	6	<1.8	<0.1	<5.0	6		

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Methyl t-Butyl Ether (MTBE)	<0.5	<0.1	<0.5	369	<0.5	<0.1	<0.5	370	(15)	
Methyl Triclosan	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Methyl-4,6-dinitrophenol (2)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4		
Methylcholanthrene (3)	<0.007	<0.007	<0.007	2	<0.007	<0.007	<0.007	2		
Methylnaphthalene (1)	<0.006	<0.006	<0.006	2	<0.006	<0.006	<0.006	2		
Methylnaphthalene (2)	<0.006	<0.006	<0.006	2	<0.006	<0.006	<0.006	2		
MIBK	<1.0	<1.0	<1.0	367	<1.0	<1.0	<1.0	368		
Monobromoacetic acid	<2	<2	<2	12	<2	<2	<2	12		
Monochloroacetic acid	<2	<2	<2	12	<2	<2	<2	12		
Monuron	<5	<5	<5	2	<5	<5	<5	2		
N,N-diethyl-m-toluamide	<0.005	<0.005	<0.005	2	<0.005	<0.005	<0.005	2		
N,N-diethyl-m-toluamide (DEET)	0.012	<0.005	0.018	2	0.007	<0.005	0.008	2		
Naphthalene	<0.13	<0.01	<0.30	8	<0.13	<0.01	<0.30	8		
Napropamide	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Naproxen	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
n-Butylbenzene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Nitrobenzene	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Nitrophenol (2)	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Nitrophenol (4)	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
N-Nitroso-di-n-propylamine	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
N-Nitrosodiphenylamine	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Norfloxacin	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Norfluoxetine	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
n-Propylbenzene	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2		
Ofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Oxolinic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Oxycarboxin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
p, p' - Methoxychlor	<0.03	<0.03	<0.03	4	<0.03	<0.03	<0.03	4		
Parathion	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Pentoxifylline	<0.500	<0.500	<0.500	4	<0.500	<0.500	<0.500	4		
Perylene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Phenanthrene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Phenol	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Pipemidic acid	<0.5	<0.5	<0.5	4	<0.5	<0.5	<0.5	4		
p-Isopropyltoluene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Propiconazole	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Pyrene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Pyridaben	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Quinlorac	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Quizalofop	<0.030	<0.030	<0.030	4	<0.030	<0.030	<0.030	4		
Retene	<0.01	<0.01	0.03	4	<0.01	<0.01	<0.01	4		
Salicylic acid	<0.025	<0.025	<0.025	4	<0.025	<0.025	<0.025	4		
sec-Butylbenzene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Styrene	<0.5	<0.02	<0.5	369	<0.5	<0.02	<0.5	370		
Sulfabenzamide	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfadimethoxine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfadoxine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamerazine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamethazine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamethoxazole	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		

7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Sulfapyridine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfaquinoxaline	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfathiazole	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
tert-Butylbenzene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Tetrachloroethane (1,1,1,2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Tetrachloroethane (1,1,2,2)	<1.0	<0.2	<1.0	370	<1.0	<0.2	<1.0	371		
Thiamethoxam	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Tolfenamic acid	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Total Organic Carbon	1.8	<0.5	3.3	52	1.9	0.6	3.6	52		
Total Volatile Organics (NonTHM)	<1.0	<1.0	4.5	367	<1.0	<1.0	<1.0	368		
Total Volatile Organics (Unknown)	<1.0	<1.0	2.6	365	<1.0	<1.0	<1.0	366		
Triallate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Trichloroacetic acid	9	5	17	12	9	5	18	12		
Trichlorobenzene (1,2,3)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Trichlorobenzene (1,2,4)	<0.5	<0.1	<0.5	373	<0.5	<0.1	<0.5	374		
Trichlorocarbanilide (3,4,4)	<0.025	<0.025	<0.025	4	<0.025	<0.025	<0.025	4		
Trichloroethane (1,1,1)	<0.5	<0.1	<0.5	370	<0.5	<0.1	<0.5	371		
Trichloroethane (1,1,2)	<0.06	<0.06	<0.06	2	<0.06	<0.06	<0.06	2		
Trichlorofluoromethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Trichloropropane (1,2,3)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Triclopyr	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Triclosan	<0.025	<0.025	<0.025	4	<0.025	<0.025	<0.025	4		
Trimethoprim	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Trimethylbenzene (1,2,4)	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Trimethylbenzene (1,3,5)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Vinclozolin	<0.033	<0.010	<0.040	4	<0.033	<0.010	<0.040	4		
Xylene (1,2)	<0.5	<0.5	<0.5	367	<0.5	<0.5	<0.5	368		
Xylene (1,4)	<0.5	<0.5	0.5	367	<0.5	<0.5	<0.5	368		
Xylene (m,p)	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Xylene (o)	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development (ESRD) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

7.8 ROSSDALE AND E.L. SMITH COMBINED FILTER EFFLUENT WATER ANALYSIS

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Physical										
FPA-Intensity (N/A)	0.66	0.31	1.25	19	0.86	0.38	2.50	18		
Turbidity (NTU)	0.07	0.05	0.22	365	0.08	0.06	0.18	366		0.3
UV 254 %T	94.8	87.2	97.8	366	94.7	86.8	97.7	366		
Primary Inorganics (mg/L) **										
Bromate, dissolved	<0.005	<0.003	<0.005	98	<0.005	<0.003	<0.005	99	0.01	
Chlorate, dissolved	0.14	<0.09	0.37	98	0.14	<0.04	0.27	99	1	
Chlorite, dissolved	<0.007	<0.005	<0.200	98	<0.007	<0.005	<0.200	99	1	
Nitrate (as N), dissolved	<0.04	<0.01	0.19	98	<0.04	<0.01	0.14	99	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	98	<0.005	<0.005	0.008	99	1	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	5	
Carbon Tetrachloride	<1.0	<0.5	<1.0	366	<1.0	<0.5	<1.0	367	2	
Chlorobenzene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	80 (30)	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)	<3.0	<0.5	<3.0	366	<3.0	<0.5	<3.0	367	14	
Ethylbenzene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	30	
Toluene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	60 (24)	
Trichloroethylene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	5	
Trihalomethanes	12.0	2.9	29.0	366	9.6	2.1	23.1	367	100	50
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	1	2	
Secondary Inorganics (mg/L) ***										
Ammonia as N	0.13	0.09	0.18	54	0.12	<0.05	0.22	55		
Bromide, dissolved	<0.005	<0.005	<0.020	98	<0.005	<0.005	<0.020	99		
Chloride, dissolved	5.6	4.1	9.6	98	6.2	4.0	9.9	99	(250)	
Sulphate, dissolved	76.7	39.3	134.0	98	80.1	43.0	194.0	99	(500)	

7.8 ROSSDALE AND E.L. SMITH COMBINED FILTER EFFLUENT WATER ANALYSIS

2016

									Limits	
	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Bromodichloromethane	0.7	<0.5	2.4	366	<0.6	<0.5	2.3	367		16
Bromoform	<1.0	<0.5	<1.0	366	<1.0	<0.5	<1.0	367		
Chloroform	11.3	2.6	28.1	366	9.2	2.1	22.1	367		
Dibromochloromethane	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367	(15)	
MIBK	<1.0	<1.0	<1.0	366	<1.0	<1.0	<1.0	367		
Styrene	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Tetrachloroethane (1,1,2,2)	<1.0	<0.5	<1.0	366	<1.0	<0.5	<1.0	367		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	366	<1.0	<1.0	5.9	367		
Total Volatile Organics (Unknown)	<1.0	<1.0	<1.0	365	<1.0	<1.0	1.4	366		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Xylene (1,2)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		
Xylene (1,4)	<0.5	<0.5	<0.5	366	<0.5	<0.5	<0.5	367		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development (ESRD) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

7.9 Routine Distribution System

2016

Parameter	Mean	Min	Max	Count	Limits	
					GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
Physical						
Colour (TCU)	<1	<1	1	4	(15)	10
pH (N/A)	7.8	6.5	8.2	126	(6.5 – 8.5)	7.3-8.3
Total Dissolved Solids (mg/L)	231	213	241	4	(500)	
Turbidity (NTU)	0.15	0.05	3.86	1,959		1.0/3.0
UV 254 %T	94	92	95	4		
Primary Inorganics (mg/L) **						
Antimony	<0.0002	<0.0002	<0.0002	4	0.006	
Arsenic	<0.0002	<0.0002	0.0003	4	0.01	
Barium	0.058	0.052	0.066	4	1	
Boron	0.009	0.008	0.011	4	5	
Bromate, dissolved	<0.005	<0.005	<0.005	108	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	4	0.005	
Chlorate, dissolved	0.14	0.06	0.22	108	1	
Chlorine, total	1.75	0.56	2.33	1,959	>0.5 and < 3.0	>1.0 and <2.4
Chlorite, dissolved	<0.005	<0.005	<0.005	108	1	
Chromium	<0.0002	<0.0002	<0.0002	4	0.05	
Cyanide, dissolved	<0.002	<0.002	<0.002	4	0.2	
Fluoride, dissolved	0.69	0.67	0.71	4	0.5-0.9	0.6-0.8
Lead	<0.0001	<0.0001	<0.0001	4	0.01	
Mercury	<0.0001	<0.0001	<0.0001	5	0.001	
Nitrate (as N), dissolved	0.05	0.01	0.12	126	10	
Nitrite (as N), dissolved	<0.01	<0.01	0.02	108	1	
Selenium	0.0002	0.0002	0.0003	4	0.01	
Uranium	<0.0005	<0.0005	<0.0005	4	0.02	

7.9 Routine Distribution System

2016

Parameter	Mean	Min	Max	Count	Limits	
					GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
Primary Organics (ug/L) **						
2,4-D	<0.005	<0.005	<0.005	4	100	
Atrazine	<0.005	<0.005	<0.005	4	5	
Benzene	<0.5	<0.1	<0.5	177	5	
Benzo(a)pyrene	<0.005	<0.005	<0.005	4	0.01	
Bromoxynil	<0.006	<0.005	0.008	4	5	
Carbon Tetrachloride	<1.0	<0.03	<1.0	177	5	
Chlorobenzene	<0.5	<0.03	<0.5	177	80	
Chlorpyrifos	<0.005	<0.005	<0.005	4	90	
Cyanazine	<0.060	<0.060	<0.060	4	10	
Diazinon	<0.005	<0.005	<0.005	4	20	
Dicamba	<0.005	<0.005	<0.005	4	120	
Dichlorobenzene (1,2)	<0.5	<0.03	<0.5	177	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.1	<0.5	177	5 (1)	
Dichloroethane (1,2)	<0.1	<0.1	<0.1	4	5	
Dichloroethylene (1,1)	<3.0	<3.0	<3.0	173	14	
Dichlorophenol (2,4)	<0.10	<0.10	<0.10	4	900 (0.3)	
Diclofop-methyl	<0.02	<0.02	<0.02	4	9	
Dimethoate	<0.005	<0.005	<0.005	4	20	
Diuron	<0.2	<0.2	<0.2	4	150	
Ethylbenzene	<0.5	<0.0	<0.5	177	(2.4)	
Glyphosate	<0.1	<0.1	<0.1	4	280	
Malathion	<0.050	<0.050	<0.050	4	190	
MCPA	<0.005	<0.005	<0.005	4	0.1	
Methylene Chloride	<0.5	<0.4	<0.5	177	50	
Metolachlor	<0.012	<0.012	<0.012	4	50	
Metribuzin	<0.010	<0.010	<0.010	4	80	
Microcystin LR	<0.10	<0.10	<0.10	2	1.5	
Microcystins (as LR)	<0.16	<0.15	0.20	4		
Nitritotriacetic acid	<0.1	<0.1	<0.2	4	0.4	
Pentachlorophenol	<0.6	<0.6	<0.6	4	60 (30)	
Picloram	<0.022	<0.022	<0.022	4	190	
Simazine	<0.010	<0.010	<0.010	4	10	
Terbufos	<0.03	<0.03	<0.03	4	1	
Tetrachloroethylene	<0.5	<0.1	<0.5	177	10	
Tetrachlorophenol (2,3,4,6)	<0.4	<0.4	<0.4	4	100 (1)	
Toluene	<0.5	<0.03	<0.5	177	(24)	
Trichloroethylene	<0.5	<0.2	<0.5	177	5	
Trichlorophenol (2,4,6)	<0.7	<0.7	<0.7	4	5 (2)	
Trifluralin	<0.005	<0.005	<0.005	4	45	
Vinyl Chloride	<0.1	<0.1	<0.1	4	2	
Xylenes	<0.125	<0.100	0.200	4	90 (20)	

7.9 Routine Distribution System

2016

Parameter	Mean	Min	Max	Count	Limits	
					GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
Secondary Inorganics (mg/L) ***						
Alkalinity, PHP (mg CaCO3/L)	<1	<1	<1	4		
Alkalinity, total (mg CaCO3/L)	116	109	121	4		
Aluminum	0.053	0.022	0.081	4	(0.1/0.2)	0.1/0.2
Ammonia as N	0.15	0.08	0.26	126		
Beryllium	<0.0002	<0.0002	<0.0002	4		
Bromide, dissolved	<0.01	<0.01	<0.01	108		
Calcium	47.5	46.0	51.7	4		
Chloride, dissolved	6.2	4.4	8.5	108	(250)	
Chlorine, free	<0.03	<0.03	<0.03	4		
Cobalt	<0.0002	<0.0002	<0.0002	4		
Copper	0.004	<0.002	0.007	4	(1)	
Hardness, total (mg CaCO3/L)	176	169	182	4		
Iron	0.021	<0.002	0.069	4	(0.3)	0.3
Lithium	0.0032	0.0029	0.0037	4		
Magnesium	13.9	12.9	15.5	4		
Manganese	<0.002	<0.002	<0.002	4	(0.05)	
Molybdenum	0.0007	0.0005	0.0008	4		
Nickel	0.0004	0.0003	0.0005	4		
Phosphorus	0.03	0.03	0.04	4		
Potassium	0.75	0.62	0.85	4		
Silicon	1.82	1.58	2.26	4		
Silver	<0.0002	<0.0002	<0.0002	4		
Sodium	10.8	5.9	15.2	4	(200)	
Strontium	0.421	0.344	0.459	4		
Sulphate, dissolved	79.7	41.3	137.0	108	(500)	
Sulphide	<0.002	<0.002	0.002	4	(0.05)	
Thallium	<0.0001	<0.0001	<0.0001	4		
Tin	<0.0002	<0.0002	<0.0002	4		
Titanium	<0.0005	<0.0005	<0.0005	4		
Total Kjeldahl Nitrogen (TKN)	0.33	0.23	0.42	4		
Vanadium	0.0003	<0.0002	0.0004	4		
Zinc	0.002	<0.002	0.003	4	(5)	
Zirconium	<0.0002	<0.0002	0.0003	4		

7.9 Routine Distribution System

2016

Parameter	Mean	Min	Max	Count	Limits	
					GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
Secondary Organics (ug/L) ***						
Bromochloroacetic acid	<2	<2	6	75		
Bromodichloromethane	0.7	<0.5	2.2	174		16
Bromoform	<1.0	<1.0	<1.0	173		
Chloroform	16.2	3.4	31.7	173		
Desethyl Atrazine	<0.050	<0.050	<0.050	4		
Desisopropyl Atrazine	<0.080	<0.080	<0.080	4		
Dibromoacetic acid	<2	<2	<2	75		
Dibromochloromethane	<0.5	<0.5	<0.5	173		
Dichloroacetic acid	12	5	25	75		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	173		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	173		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	173		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	173		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	173	(15)	
MIBK	<1.0	<1.0	<1.0	173		
Monobromoacetic acid	<2	<2	<2	75		
Monochloroacetic acid	<2	<2	3	75		
p, p' - Methoxychlor	<0.03	<0.03	<0.03	4		
Styrene	<0.5	<0.5	<0.5	173		
Tetrachloroethane (1,1,2,2)	<1.0	<1.0	<1.0	173		
Total Organic Carbon	1.5	<0.5	2.3	4		
Total Volatile Organics (NonTHM)	<1.0	<1.0	1.4	173		
Total Volatile Organics (Unknown)	<1.0	<1.0	<1.0	173		
Triallate	<0.005	<0.005	<0.005	4		
Trichloroacetic acid	9	4	20	75		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	173		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	173		
Xylene (1,2)	<0.5	<0.5	<0.5	173		
Xylene (1,4)	<0.5	<0.5	<0.5	173		
Xylene (m,p)	<0.200	<0.200	<0.200	4		
Xylene (o)	<0.020	<0.020	0.020	4		

7.10 Castledowns, Clareview and Kaskitayo Reservoir

2016

Parameter	Castledowns				Clareview				Kaskitayo				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical														
Colour (TCU)	<1	<1	2	6	<1	<1	1	6	<1	<1	1	7	(15)	10
Conductivity (uS/cm)	410	347	461	6	408	355	476	6	416	351	504	7		
Odour	Inoff	Inoff	Inoff	6	Inoff	Inoff	Inoff	6	Inoff	Inoff	Inoff	7	(Inoffensive)	Inoffensive
pH (N/A)	7.8	7.7	8.0	6	7.9	7.8	8.0	6	7.7	7.0	7.9	7	(6.5 – 8.5)	7.3-8.3
Turbidity (NTU)	0.09	0.06	0.24	52	0.21	0.07	0.78	52	0.07	0.05	0.11	52		1.0/3.0
Primary Inorganics (mg/L) **														
Antimony	<0.0002	<0.0002	0.0003	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	0.006	
Arsenic	0.0002	0.0002	0.0003	6	0.0003	<0.0002	0.0004	6	0.0003	0.0002	0.0003	6	0.01	
Barium	0.064	0.053	0.075	6	0.064	0.054	0.082	6	0.063	0.054	0.076	6	1	
Boron	0.009	0.007	0.012	6	0.010	0.007	0.016	6	0.009	0.007	0.012	6	5	
Bromate, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.005	
Chlorate, dissolved	0.135	0.114	0.170	6	0.143	0.110	0.191	6	0.159	0.124	0.230	7	1	
Chlorine, total	1.81	1.42	2.13	52	1.58	1.12	2.07	52	1.91	1.50	2.21	52	>0.5 and < 3.0	>1.0 and <2.4
Chlorite, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	1	
Chromium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	0.05	
Fluoride, dissolved	0.67	0.62	0.72	6	0.69	0.67	0.72	6	0.69	0.65	0.71	7	0.5-0.9	0.6-0.8
Lead	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.01	
Mercury	<0.0001	<0.0001	0.0001	6	<0.0001	<0.0001	0.0002	6	<0.0001	<0.0001	0.0002	6	0.001	
Nitrate (as N), dissolved	0.06	0.02	0.08	6	0.05	0.02	0.09	6	0.04	0.01	0.10	7	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	1	
Selenium	0.0002	<0.0002	0.0003	6	0.0003	0.0002	0.0003	6	0.0002	<0.0002	0.0003	6	0.05	
Uranium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	0.02	

7.10 Castledowns, Clareview and Kaskitayo Reservoir

2016

Parameter	Castledowns				Clareview				Kaskitayo				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **														
Benzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5	
Carbon Tetrachloride	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	5	
Chlorobenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	80	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5 (1)	
Dichloroethylene (1,1)	<3.0	<3.0	<3.0	6	<3.0	<3.0	<3.0	6	<3.0	<3.0	<3.0	7	14	
Ethylbenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	10	
Toluene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	60 (24)	
Trichloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5	
Secondary Inorganics (mg/L) ***														
Alkalinity, total (mg CaCO3/L)	118	104	128	6	115	101	127	6	123	114	136	7		

7.10 Castledowns, Clareview and Kaskitayo Reservoir

2016

Parameter	Castledowns				Clareview				Kaskitayo				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Aluminum	0.038	0.024	0.066	6	0.056	0.024	0.079	6	0.060	0.028	0.078	6	(0.1/0.2)	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Bromide, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7		
Calcium	46.3	42.7	50.0	6	47.0	43.0	49.7	6	46.6	43.0	50.8	6		
Chloride, dissolved	6.1	4.6	7.1	6	5.8	4.7	6.8	6	5.9	4.9	7.7	7	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Copper	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	(1)	
Hardness, Ca (mg CaCO3/L)	118	110	126	6	119	114	124	6	121	111	127	7		
Hardness, total (mg CaCO3/L)	175	161	186	6	178	173	183	6	178	170	186	7		
Iron	0.003	<0.002	0.005	6	0.033	0.012	0.114	6	<0.002	<0.002	0.003	6	(0.3)	0.3
Lithium	0.0030	0.0024	0.0039	6	0.0032	0.0028	0.0037	6	0.0031	0.0027	0.0037	6		
Magnesium	13.0	11.9	13.9	6	13.5	12.8	15.0	6	13.7	12.9	14.9	6		
Manganese	0.003	<0.002	0.006	6	<0.003	<0.002	0.005	6	<0.003	<0.002	0.005	6	(0.05)	
Molybdenum	0.0007	0.0006	0.0008	6	0.0008	0.0007	0.0009	6	0.0007	0.0006	0.0009	6		
Nickel	0.0005	0.0003	0.0007	6	0.0005	0.0003	0.0008	6	0.0004	0.0003	0.0007	6		
Phosphorus	0.03	<0.01	0.05	6	0.03	0.02	0.04	6	0.03	0.02	0.04	6		
Potassium	0.80	0.56	1.07	6	0.78	0.57	1.05	6	0.79	0.56	1.17	6		
Silicon	1.95	1.43	2.29	6	1.83	1.37	2.68	6	1.88	1.29	2.80	6		
Silver	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0004	6	<0.0002	<0.0002	0.0004	6		
Sodium	15.8	5.6	30.4	6	12.1	6.1	24.7	6	15.1	5.8	34.9	6	(200)	
Strontium	0.408	0.392	0.429	6	0.422	0.337	0.467	6	0.428	0.343	0.480	6		
Sulphate, dissolved	80.8	55.4	112.0	6	78.2	56.0	118.0	6	80.4	56.6	118	7	(500)	
Thallium	<0.0001	<0.0001	0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6		
Tin	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Titanium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6		
Vanadium	0.0005	0.0003	0.0006	6	0.0005	0.0003	0.0006	6	0.0005	0.0003	0.0006	6		
Zinc	0.002	<0.002	0.003	6	<0.002	<0.002	<0.002	6	<0.002	<0.002	0.002	6	(5)	
Zirconium	<0.0002	<0.0002	0.0003	6	<0.0002	<0.0002	0.0003	6	<0.0002	<0.0002	<0.0002	6		
Secondary Organics (ug/L) ***														
Bromodichloromethane	0.7	<0.5	0.9	6	0.9	0.7	1.3	6	0.8	0.5	1.1	7		16

7.10 Castledowns, Clareview and Kaskitayo Reservoir

2016

Parameter	Castledowns				Clareview				Kaskitayo				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Bromoform	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	(15)	
Chloroform	14.8	4.0	27.1	6	16.9	9.2	27.1	6	14.9	7.3	23.1	7		
Dibromochloromethane	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
MIBK	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Styrene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Tetrachloroethane (1,1,2,2)	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Total Organic Carbon	2.0	0.8	3.0	6	1.8	0.9	3.0	6	2.0	0.9	3.1	7		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	6	<1.0	<1.0	1.0	6	<1.0	<1.0	<1.0	7		
Total Volatile Organics (Unknown)	<1.1	<1.0	1.3	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Xylene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Xylene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada Guidelines for Canadian Drinking Water Quality Maximum

*** Secondary Parameters do not have health based limits in Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration (GCDWG).

7.11 Londonderry, Millwoods and North Jasper Place Reservoir

2016

Parameter	Londonderry				Millwoods				North Jasper Place				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical														
Colour (TCU)	<1	<1	<1	6	<1	<1	1	7	<1	<1	1	6	(15)	10
Conductivity (uS/cm)	397	352	435	6	424	344	518	7	416	353	513	6		
Odour	Inoff	Inoff	Inoff	6	Inoff	Inoff	Inoff	7	Inoff	Inoff	Inoff	6	(Inoffensive)	Inoffensive
pH (N/A)	7.9	7.7	8.1	6	7.7	7.5	7.9	7	7.9	7.8	8.0	6	(6.5 – 8.5)	7.3-8.3
Turbidity (NTU)	0.11	0.07	0.30	52	0.08	0.06	0.14	52	0.11	0.06	0.45	51		1.0/3.0
Primary Inorganics (mg/L) **														
Antimony	<0.0002	<0.0002	0.0003	6	<0.0002	<0.0002	0.0002	6	<0.0002	<0.0002	<0.0002	6	0.006	
Arsenic	0.0002	<0.0002	0.0003	6	0.0003	<0.0002	0.0003	6	0.0003	0.0002	0.0004	6	0.01	
Barium	0.062	0.054	0.073	6	0.062	0.054	0.074	6	0.065	0.054	0.085	6	1	
Boron	0.009	0.007	0.012	6	0.009	0.006	0.012	6	0.010	0.008	0.019	6	5	
Bromate, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	6	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.005	
Chlorate, dissolved	0.132	0.106	0.175	6	0.129	0.072	0.172	7	0.151	0.123	0.203	6	1	
Chlorine, total	1.81	1.31	2.15	52	1.88	1.44	2.18	52	1.51	0.96	2.09	51	>0.5 and < 3.0	>1.0 and <2.4
Chlorite, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	6	1	
Chromium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	0.0006	<0.0002	0.0026	6	0.05	
Fluoride, dissolved	0.66	0.59	0.71	6	0.68	0.63	0.73	7	0.70	0.68	0.72	6	0.5-0.9	0.6-0.8
Lead	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.01	
Mercury	<0.0001	<0.0001	0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	0.0002	6	0.001	
Nitrate (as N), dissolved	0.06	0.02	0.09	6	0.05	0.02	0.09	7	0.05	0.02	0.09	6	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	6	1	
Selenium	0.0002	<0.0002	0.0003	6	0.0002	<0.0002	0.0003	6	0.0002	0.0002	0.0003	6	0.05	
Uranium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	0.02	

7.11 Londonderry, Millwoods and North Jasper Place Reservoir

2016

Parameter	Londonderry				Millwoods				North Jasper Place				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **														
Benzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	5	
Carbon Tetrachloride	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	6	5	
Chlorobenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	80	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	5 (1)	
Dichloroethylene (1,1)	<3.0	<3.0	<3.0	6	<3.0	<3.0	<3.0	7	<3.0	<3.0	<3.0	6	14	
Ethylbenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	10	
Toluene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	60 (24)	
Trichloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6	5	

7.11 Londonderry, Millwoods and North Jasper Place Reservoir

2016

Parameter	Londonderry				Millwoods				North Jasper Place				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) ***														
Alkalinity, total (mg CaCO3/L)	115	103	128	6	116	105	136	7	119	113	131	6		
Aluminum	0.041	0.027	0.066	6	0.036	0.022	0.068	6	0.052	0.028	0.076	6	(0.1/0.2)	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Bromide, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	6		
Calcium	45.7	42.9	48.5	6	46.4	43.0	51.3	6	47.4	43.7	51.5	6		
Chloride, dissolved	6.2	5.0	7.4	6	6.7	4.7	8.4	7	6.0	4.7	7.8	6	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Copper	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	(1)	
Hardness, Ca (mg CaCO3/L)	117	113	122	6	122	110	132	7	119	114	124	6		
Hardness, total (mg CaCO3/L)	175	166	182	6	176	163	195	7	178	170	184	6		
Iron	0.007	0.004	0.012	6	<0.002	<0.002	0.003	6	0.008	0.003	0.018	6	(0.3)	0.3
Lithium	0.0032	0.0025	0.0040	6	0.0028	0.0020	0.0037	6	0.0029	0.0024	0.0033	6		
Magnesium	13.1	12.1	14.0	6	13.1	11.8	14.9	6	13.6	12.7	15.1	6		
Manganese	<0.002	<0.002	<0.002	6	<0.002	<0.002	0.003	6	0.004	<0.002	0.016	6	(0.05)	
Molybdenum	0.0008	0.0007	0.0008	6	0.0007	0.0006	0.0008	6	0.0008	0.0006	0.0010	6		
Nickel	0.0005	0.0003	0.0007	6	0.0005	0.0003	0.0007	6	0.0007	0.0003	0.0019	6		
Phosphorus	0.03	<0.01	0.04	6	0.03	<0.01	0.05	6	0.03	0.02	0.04	6		
Potassium	0.83	0.59	1.12	6	0.77	0.57	0.95	6	0.80	0.58	1.08	6		
Silicon	1.95	1.45	2.25	6	1.98	1.43	2.25	6	1.86	1.41	2.65	6		
Silver	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0004	6		
Sodium	13.0	6.7	21.7	6	15.4	5.8	26.3	6	14.8	6.2	32.0	6	(200)	
Strontium	0.403	0.385	0.432	6	0.408	0.380	0.437	6	0.419	0.341	0.464	6		
Sulphate, dissolved	77.4	56.1	99.6	6	87.5	54.7	132	7	80.2	55.4	123	6	(500)	
Thallium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6		
Tin	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Titanium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6		
Vanadium	0.0004	0.0003	0.0006	6	0.0005	0.0003	0.0007	6	0.0005	0.0003	0.0006	6		
Zinc	0.009	0.008	0.011	6	<0.002	<0.002	0.003	6	<0.002	<0.002	<0.002	6	(5)	
Zirconium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0003	6		

7.11 Londonderry, Millwoods and North Jasper Place Reservoir

2016

Parameter	Londonderry				Millwoods				North Jasper Place				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) ***														
Bromodichloromethane	0.8	<0.5	1.1	6	0.7	<0.5	1.0	7	0.8	0.7	1.1	6	(15)	16
Bromoform	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	6		
Chloroform	16.1	5.0	26.4	6	15.1	5.0	27.6	7	17.3	9.6	27.0	6		
Dibromochloromethane	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
MIBK	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	6		
Styrene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Tetrachloroethane (1,1,2,2)	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	6		
Total Organic Carbon	2.0	0.6	3.3	6	2.1	1.0	3.3	7	1.8	1.0	3.0	6		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	1.2	6		
Total Volatile Organics (Unknown)	<1.1	<1.0	1.7	6	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	6		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Xylene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		
Xylene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	6		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada Guidelines for Canadian Drinking Water Quality Maximum

*** Secondary Parameters do not have health based limits in Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration (GCDWG).

7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoir

2016

Parameter	Ormsby				Papaschase 1				Papaschase 2				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical														
Colour (TCU)	<1	<1	<1	7	<1	<1	1	7	<1	<1	1	7	(15)	10
Conductivity (uS/cm)	428	344	514	7	421	344	500	7	407	354	485	7		
Odour	Inoff	Inoff	Inoff	7	Inoff	Inoff	Inoff	7	Inoff	Inoff	Inoff	7	(Inoffensive)	Inoffensive
pH (N/A)	7.7	7.5	7.9	7	7.8	7.7	7.9	7	7.8	7.4	7.9	7	(6.5 – 8.5)	7.3-8.3
Turbidity (NTU)	0.09	0.06	0.22	52	0.19	0.06	0.64	50	0.10	0.06	0.24	52		1.0/3.0
Primary Inorganics (mg/L) **														
Antimony	<0.0002	<0.0002	0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	<0.0002	7	0.006	
Arsenic	0.0002	<0.0002	0.0003	6	<0.0002	<0.0002	0.0003	8	0.0003	<0.0002	0.0003	7	0.01	
Barium	0.062	0.055	0.074	6	0.064	0.057	0.075	8	0.063	0.054	0.076	7	1	
Boron	0.009	0.006	0.011	6	0.009	0.006	0.012	8	0.009	0.007	0.012	7	5	
Bromate, dissolved	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	8	<0.0001	<0.0001	<0.0001	7	0.005	
Chlorate, dissolved	0.133	0.088	0.173	7	0.120	<0.005	0.207	7	0.146	0.114	0.208	7	1	
Chlorine, total	1.78	1.22	2.16	52	1.69	1.04	2.06	50	1.84	1.44	2.22	52	>0.5 and < 3.0	>1.0 and <2.4
Chlorite, dissolved	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	1	
Chromium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0003	8	<0.0002	<0.0002	<0.0002	7	0.05	
Fluoride, dissolved	0.68	0.65	0.72	7	0.67	0.64	0.71	7	0.69	0.66	0.72	7	0.5-0.9	0.6-0.8
Lead	<0.0001	<0.0001	<0.0001	6	0.0002	<0.0001	0.0007	8	<0.0001	<0.0001	<0.0001	7	0.01	
Mercury	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	8	<0.0001	<0.0001	0.0001	7	0.001	
Nitrate (as N), dissolved	0.06	0.02	0.09	7	0.06	0.03	0.09	7	0.04	0.01	0.10	7	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	1	
Selenium	0.0002	<0.0002	0.0003	6	0.0002	<0.0002	0.0003	8	0.0002	0.0002	0.0003	7	0.05	
Uranium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	8	<0.0005	<0.0005	<0.0005	7	0.02	

7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoir

2016

Parameter	Ormsby				Papaschase 1				Papaschase 2				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **														
Benzene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	5	
Carbon Tetrachloride	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	5	
Chlorobenzene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	80	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	5 (1)	
Dichloroethylene (1,1)	<3.0	<3.0	<3.0	7	<3.0	<3.0	<3.0	7	<3.0	<3.0	<3.0	7	14	
Ethylbenzene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	10	
Toluene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	60 (24)	
Trichloroethylene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	5	

7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoir

2016

Parameter	Ormsby				Papaschase 1				Papaschase 2				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) ***														
Alkalinity, total (mg CaCO ₃ /L)	116	106	133	7	113	96	137	7	121	111	129	7		
Aluminum	0.037	0.024	0.074	6	0.040	0.021	0.072	8	0.051	0.022	0.085	7	(0.1/0.2)	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	<0.0002	7		
Bromide, dissolved	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7	<0.005	<0.005	<0.005	7		
Calcium	46.1	43.6	49.4	6	46.5	43.0	51.3	6	46.8	43.3	50.3	6		
Chloride, dissolved	6.7	4.6	8.5	7	6.2	4.8	7.4	7	5.9	4.7	7.2	7	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	<0.0002	7		
Copper	<0.002	<0.002	<0.002	6	<0.003	<0.002	0.007	8	<0.002	<0.002	<0.002	7	(1)	
Hardness, Ca (mg CaCO ₃ /L)	123	117	133	7	120	115	127	7	119	108	123	7		
Hardness, total (mg CaCO ₃ /L)	175	165	188	7	178	168	199	7	177	171	185	7		
Iron	<0.002	<0.002	0.004	6	0.034	0.012	0.089	8	0.004	<0.002	0.009	7	(0.3)	0.3
Lithium	0.0028	0.0021	0.0036	6	0.0033	0.0026	0.0042	8	0.0033	0.0027	0.0039	7		
Magnesium	13.1	12.0	14.7	6	13.2	11.8	15.2	6	13.6	13.0	15.0	6		
Manganese	<0.002	<0.002	0.004	6	<0.002	<0.002	0.002	8	<0.002	<0.002	0.003	7	(0.05)	
Molybdenum	0.0007	0.0006	0.0008	6	0.0007	0.0006	0.0009	8	0.0007	0.0006	0.0009	7		
Nickel	0.0005	0.0003	0.0008	6	0.0005	0.0003	0.0006	8	0.0004	0.0003	0.0007	7		
Phosphorus	0.02	<0.01	0.04	6	0.03	<0.01	0.05	6	0.03	0.02	0.03	6		
Potassium	0.79	0.57	1.00	6	0.79	0.55	1.04	6	0.79	0.56	1.14	6		
Silicon	1.97	1.44	2.31	6	1.93	1.40	2.30	6	1.88	1.36	2.82	6		
Silver	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	0.0004	7		
Sodium	16.2	5.7	28.6	6	13.9	5.9	21.9	6	13.1	5.9	29.6	6	(200)	
Strontium	0.408	0.364	0.463	6	0.414	0.376	0.464	8	0.422	0.336	0.481	7		
Sulphate, dissolved	87.6	54.8	126	7	87.5	55.1	134	7	78.4	57.6	115	7	(500)	
Thallium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	8	<0.0001	<0.0001	0.0001	7		
Tin	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	<0.0002	7		
Titanium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	8	<0.0005	<0.0005	<0.0005	7		
Vanadium	0.0005	0.0003	0.0007	6	0.0004	<0.0002	0.0007	8	0.0004	<0.0002	0.0006	7		
Zinc	0.003	<0.002	0.004	6	<0.003	<0.002	0.006	8	<0.002	<0.002	<0.002	7	(5)	
Zirconium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	8	<0.0002	<0.0002	0.0005	7		

7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoir

2016

Parameter	Ormsby				Papaschase 1				Papaschase 2				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) ***														
Bromodichloromethane	0.7	0.6	0.8	7	0.8	0.5	1.0	7	0.9	0.6	1.4	7	(15)	16
Bromoform	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7		
Chloroform	15.4	5.4	26.5	7	16.5	5.1	26.8	7	13.8	7.7	24.0	7		
Dibromochloromethane	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
MIBK	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7		
Styrene	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Tetrachloroethane (1,1,2,2)	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7		
Total Organic Carbon	2.1	1.0	3.1	7	2.1	1.0	3.3	7	1.9	0.9	3.0	7		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7		
Total Volatile Organics (Unknown)	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7	<1.0	<1.0	<1.0	7		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Xylene (1,2)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		
Xylene (1,4)	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7	<0.5	<0.5	<0.5	7		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada Guidelines for Canadian Drinking Water Quality Maximum

*** Secondary Parameters do not have health based limits in Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration (GCDWG).

7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoir

2016

Parameter	Rosslyn 1				Rosslyn 2				Thorncliff				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical														
Colour (TCU)	<1	<1	1	6	<1	<1	1	6	<1	<1	1	7	(15)	10
Conductivity (uS/cm)	403	361	446	6	403	359	480	6	417	361	503	7		
Odour	Inoff	Inoff	Inoff	6	Inoff	Inoff	Inoff	6	Inoff	Inoff	Inoff	7	(Inoffensive)	Inoffensive
pH (N/A)	7.9	7.8	8.1	6	7.9	7.8	7.9	6	7.8	7.5	8.0	7	(6.5 – 8.5)	7.3-8.3
Turbidity (NTU)	0.15	0.09	0.29	53	0.11	0.06	0.27	52	0.09	0.06	0.29	46		1.0/3.0
Primary Inorganics (mg/L) **														
Antimony	<0.0002	<0.0002	0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	0.006	
Arsenic	0.0002	0.0002	0.0003	6	0.0003	<0.0002	0.0004	6	0.0003	<0.0002	0.0003	6	0.01	
Barium	0.063	0.053	0.080	6	0.067	0.055	0.091	6	0.064	0.054	0.078	6	1	
Boron	0.009	0.007	0.011	6	0.011	0.007	0.023	6	0.010	0.007	0.015	6	5	
Bromate, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.005	
Chlorate, dissolved	0.132	0.106	0.167	6	0.148	0.117	0.198	6	0.153	0.123	0.210	7	1	
Chlorine, total	1.43	1.00	1.82	53	1.72	1.10	2.08	52	1.58	1.02	2.06	46	>0.5 and < 3.0	>1.0 and <2.4
Chlorite, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	1	
Chromium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	0.05	
Fluoride, dissolved	0.66	0.61	0.70	6	0.68	0.65	0.72	6	0.69	0.66	0.72	7	0.5-0.9	0.6-0.8
Lead	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	0.01	
Mercury	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	0.0001	6	<0.0001	<0.0001	0.0001	6	0.001	
Nitrate (as N), dissolved	0.06	0.02	0.09	6	0.05	0.01	0.09	6	0.05	0.02	0.09	7	10	
Nitrite (as N), dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7	1	
Selenium	0.0003	0.0002	0.0003	6	0.0002	0.0002	0.0003	6	0.0002	<0.0002	0.0003	6	0.05	
Uranium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	0.02	

7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoir

2016

Parameter	Rosslyn 1				Rosslyn 2				Thorncliff				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **														
Benzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5	
Carbon Tetrachloride	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7	5	
Chlorobenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	80	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5 (1)	
Dichloroethylene (1,1)	<3.0	<3.0	<3.0	6	<3.0	<3.0	<3.0	6	<3.0	<3.0	<3.0	7	14	
Ethylbenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	10	
Toluene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	60 (24)	
Trichloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7	5	

7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoir

2016

Parameter	Rosslyn 1				Rosslyn 2				Thorncliff				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) ***														
Alkalinity, total (mg CaCO3/L)	119	112	125	6	117	102	128	6	122	115	130	7		
Aluminum	0.049	0.029	0.066	6	0.060	0.024	0.100	6	0.055	0.031	0.078	6	(0.1/0.2)	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Bromide, dissolved	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	6	<0.005	<0.005	<0.005	7		
Calcium	47.1	44.3	51.9	6	47.1	43.3	50.3	6	47.0	42.6	51.2	6		
Chloride, dissolved	6.0	5.2	6.8	6	5.7	4.7	6.9	6	6.2	4.8	7.8	7	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Copper	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	<0.002	<0.002	<0.002	6	(1)	
Hardness, Ca (mg CaCO3/L)	119	113	130	6	121	116	126	6	122	112	129	7		
Hardness, total (mg CaCO3/L)	178	165	187	6	182	173	190	6	179	171	190	7		
Iron	0.012	0.008	0.021	6	0.004	<0.002	0.010	6	<0.002	<0.002	0.003	6	(0.3)	0.3
Lithium	0.0031	0.0025	0.0036	6	0.0032	0.0027	0.0039	6	0.0031	0.0028	0.0033	6		
Magnesium	13.5	13.0	14.0	6	13.6	12.5	15.2	6	13.6	13.0	14.9	6		
Manganese	<0.002	<0.002	<0.002	6	<0.002	<0.002	0.004	6	0.003	<0.002	0.009	6	(0.05)	
Molybdenum	0.0008	0.0007	0.0008	6	0.0008	0.0006	0.0010	6	0.0007	0.0006	0.0008	6		
Nickel	0.0004	0.0003	0.0005	6	0.0005	0.0003	0.0009	6	0.0005	0.0003	0.0008	6		
Phosphorus	0.03	<0.01	0.06	6	0.03	0.02	0.03	6	0.03	0.02	0.04	6		
Potassium	0.78	0.60	0.93	6	0.79	0.56	1.15	6	0.80	0.57	1.11	6		
Silicon	1.84	1.40	2.26	6	1.83	1.39	2.53	6	1.87	1.49	2.79	6		
Silver	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0004	6	<0.0002	<0.0002	0.0004	6		
Sodium	12.4	6.2	18.3	6	11.7	5.9	22.7	6	14.9	6.0	34.5	6	(200)	
Strontium	0.425	0.382	0.461	6	0.428	0.348	0.475	6	0.420	0.340	0.475	6		
Sulphate, dissolved	76.4	57.2	96.6	6	78.6	57.8	121	6	80.4	55.5	120	7	(500)	
Thallium	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6	<0.0001	<0.0001	<0.0001	6		
Tin	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6		
Titanium	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6	<0.0005	<0.0005	<0.0005	6		
Vanadium	0.0005	0.0003	0.0007	6	0.0005	0.0003	0.0006	6	0.0005	0.0003	0.0006	6		
Zinc	<0.002	<0.002	0.004	6	<0.002	<0.002	<0.002	6	0.003	<0.002	0.004	6	(5)	
Zirconium	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	<0.0002	6	<0.0002	<0.0002	0.0003	6		

7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoir

2016

Parameter	Rosslyn 1				Rosslyn 2				Thorncliff				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) ***														
Bromodichloromethane	0.8	<0.5	1.0	6	0.9	0.6	1.4	6	0.8	0.7	1.1	7	(15)	16
Bromoform	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Chloroform	15.7	5.7	25.4	6	16.5	7.6	29.4	6	16.4	8.4	24.3	7		
Dibromochloromethane	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
MIBK	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Styrene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Tetrachloroethane (1,1,2,2)	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Total Organic Carbon	1.8	0.6	2.9	6	1.8	1.0	2.9	6	1.9	0.9	2.9	7		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	6	<1.0	<1.0	1.0	6	<1.0	<1.0	1.0	7		
Total Volatile Organics (Unknown)	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	6	<1.0	<1.0	<1.0	7		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Xylene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		
Xylene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	7		

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Sustainable Resource Development

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada Guidelines for Canadian Drinking Water Quality Maximum

*** Secondary Parameters do not have health based limits in Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration (GCDWG).

7.14 Routine Distribution System, Field Reservoirs, Fire Stations and Staff Residences
Disinfection Byproducts, HAA, THM, NDMA

2016

HAA (Haloacetic Acid)

Parameter or Location	12 months running				GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
	Mean	Min	Max	Count	12 month running	single result
HAA (ug/L)					80	40
01-SR	21.1	13.4	38.7	6		
02-SR	11.8	11.8	11.8	1		
03-SR	39.7	39.7	39.7	1		
04-SR	33.5	32.4	34.5	2		
05-SR	16.9	10.4	27.8	7		
07-OF	16.1	13.2	18.9	2		
07-SR	16.8	9.2	32.5	5		
08-SR	22.5	10.4	32.5	7		
10-OF	11.9	11.9	11.9	1		
11-SR	22.2	22.2	22.2	1		
12-SR	21.8	13.7	29.9	2		
13-RI	12.6	11.0	13.5	3		
13-SR	39.9	39.9	39.9	1		
14-SR	19.6	10.3	27.2	3		
17-SR	23.8	12.7	34.8	2		
19-RI	24.7	13.4	37.2	8		
19-SR	29.3	29.3	29.3	1		
22-SR	28.3	21.5	35.6	4		
24-RI	22.0	12.4	30.7	10		
26-OF	10.5	10.5	10.5	1		
26-SR	18.3	10.4	26.1	2		
27-SR	15.2	15.2	15.2	1		
28-SR	31.9	31.9	31.9	1		
29-SR	29.9	14.6	45.1	2		
31-SR	19.2	19.2	19.2	1		
Total Count				74		
Mean	22.4	17.6	27.9			
Min	10.5	9.2	10.5			
Max	39.9	39.9	45.1			

7.14 Routine Distribution System, Field Reservoirs, Fire Stations and Staff Residences
Disinfection Byproducts, HAA, THM, NDMA

2016

Trihalomethanes

Parameter or Location	12 months running				GCDWQ or Approval or MAC* or (AO or OG)	EPCOR
	Mean	Min	Max	Count	12 month running	single result
Trihalomethanes (ug/L)					100	50
01-RI	16.6	6.9	28.6	12		
01-SR	15.8	8.1	31.1	6		
02-SR	6.3	6.3	6.3	1		
03-SR	28.5	28.5	28.5	1		
04-SR	26.5	25.0	28.0	2		
05-SR	11.0	5.6	23.9	7		
07-OF	14.5	7.3	22.6	3		
07-SR	11.5	4.6	27.7	5		
08-SR	15.9	4.2	27.0	7		
10-DE	16.6	6.4	29.8	12		
11-DE	17.7	7.2	30.0	13		
11-SR	23.7	23.7	23.7	1		
12-SR	15.2	10.6	19.8	2		
13-RI	17.5	7.6	30.2	17		
13-SR	27.5	27.5	27.5	1		
14-SR	15.4	5.0	24.0	3		
16-DE	14.5	3.8	27.0	12		
17-SR	13.5	6.3	20.6	2		
18-DE	19.0	7.4	32.0	12		
19-RI	21.5	11.2	31.1	7		
19-SR	28.1	28.1	28.1	1		
22-SR	23.7	16.0	32.5	4		
24-RI	18.2	6.6	31.6	12		
25-RI	17.2	6.8	28.8	12		
26-SR	15.8	6.9	24.7	2		
27-SR	9.0	9.0	9.0	1		
28-DE	15.3	4.5	28.6	12		
28-SR	26.6	26.6	26.6	1		
29-SR	17.7	9.7	25.7	2		
31-SR	11.2	11.2	11.2	1		
Total Count				174		
	Mean	17.7	11.3	25.5		
	Min	6.3	3.8	6.3		
	Max	28.5	28.5	32.5		

7.14 Routine Distribution System, Field Reservoirs, Fire Stations and Staff Residences
Disinfection Byproducts, HAA, THM, NDMA

2016

Trihalomethanes

Parameter or Location	12 months running				GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
	Mean	Min	Max	Count		
Trihalomethanes (ug/L)					100	50
CASTLEDOWNS RESERVOIR	15.5	4.4	27.9	6		
CLAREVIEW RESERVOIR	17.8	10.0	27.9	6		
KASKITAYO RESERVOIR	15.7	7.9	24.1	7		
LONDONDERRY RESERVOIR	16.9	5.5	27.4	6		
MILLWOODS RESERVOIR	15.7	5.5	28.6	7		
NORTH JASPER RESERVOIR	18.1	10.3	27.8	6		
ORMSBY RESERVOIR	16.0	5.9	27.4	7		
PAPASCHASE RESERVOIR 1	17.2	5.6	27.7	7		
PAPASCHASE RESERVOIR 2	14.7	8.3	25.0	7		
ROSSLYN RESERVOIR 1	16.5	6.2	26.3	6		
ROSSLYN RESERVOIR 2	17.5	8.4	30.3	6		
THORNCLIFF RESERVOIR	17.2	9.1	25.2	7		

Parameter or Location	12 months running				GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
	Mean	Min	Max	Count		
NDMA (ng/L)					40	40
01-SR	3.9	2.2	5.8	3		
02-SR	1.9	1.9	1.9	1		
05-SR	5.1	1.8	8.4	3		
07-OF	2.8	0.7	4.9	2		
07-SR	1.2	0.5	2.3	4		
08-SR	2.2	0.9	5.5	5		
12-SR	5.1	5.1	5.1	1		
13-RI	2.5	1.5	3.6	4		
14-SR	4.4	1.0	7.6	3		
17-SR	2.3	2.3	2.3	1		
19-RI	4.9	3.5	7.4	5		
22-SR	5.5	2.1	9.9	3		
24-RI	11.0	7.0	15.0	2		
27-SR	1.6	1.6	1.6	1		
29-SR	1.6	1.6	1.6	1		
Total Count				39		
Mean	3.7	2.2	5.5			
Min	1.2	0.5	1.6			
Max	11.0	7.0	15.0			

Location Code: City is divided into 28 zones by population. Location is coded by zone and site type.

- RI - Regional Influent
- SR - Staff Residence
- DE - Dead End
- PF - Plant First Customer (Guardhouse)
- FS - Firestation
- PR - Private Residence (Non-Staff)

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Physical										
Colour (TCU)	14	1	67	53	13	<1	55	53	(15)	10
Conductivity (uS/cm)	353	312	416	53	350	310	412	53		
FPA-Intensity (N/A)	0.56	0.25	1.62	66	0.56	0.25	1.69	65		
pH (N/A)	8.3	8.1	8.5	13	8.3	8.1	8.5	12	(6.5–8.5)	7.3-8.3
Total Dissolved Solids (mg/L)	220	196	245	12	212	180	230	12	(500)	
Total Suspended Solids (mg/L)	46	<5	342	12	50	<5	400	12		
Turbidity (NTU) (daily)	35.1	1.16	3,140	365	33.0	0.06	2,470	365	(1.0)	1
Primary Inorganics (mg/L) **										
Antimony	<0.0002	<0.0002	0.0004	12	<0.0002	<0.0002	0.0003	12	0.006	
Antimony, dissolved	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12	0.006	
Arsenic	0.0006	0.0003	0.0012	12	0.0005	0.0003	0.0012	12	0.010	
Arsenic, dissolved	0.0003	<0.0002	0.0005	12	0.0003	<0.0002	0.0005	12	0.010	
Barium	0.071	0.056	0.098	12	0.071	0.057	0.097	12	1.0	
Barium, dissolved	0.065	0.055	0.074	12	0.064	0.053	0.074	12	1.0	
Boron	0.010	0.008	0.016	12	0.010	0.007	0.016	12	5	
Boron, dissolved	0.010	0.008	0.013	12	0.009	0.008	0.013	12	5	
Bromate, dissolved	<0.005	<0.003	<0.005	96	<0.005	<0.003	<0.005	98	0.01	
Cadmium	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.005	
Cadmium, dissolved	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.005	
Chlorate, dissolved	<0.006	<0.005	<0.100	96	<0.006	<0.005	<0.100	98	1	
Chlorine, total	<0.03	<0.03	<0.03	13	<0.03	<0.03	<0.03	12	0.5 - 3.0	1.0 -2.4
Chlorite, dissolved	<0.007	<0.005	<0.200	96	<0.007	<0.005	<0.200	98	1	
Chromium	0.0009	<0.0002	0.0042	12	0.0091	<0.0002	0.1052	12	0.05	
Chromium, dissolved	<0.0002	<0.0002	0.0005	12	<0.0002	<0.0002	0.0005	12		
Cyanide, dissolved	<0.002	<0.002	0.002	12	<0.002	<0.002	<0.002	12	0.2	
Fluoride, dissolved	0.13	0.10	0.19	52	0.12	0.09	0.14	52	1.5	0.6–0.8
Lead	0.0004	<0.0001	0.0015	12	0.0003	<0.0001	0.0010	12	0.010	
Lead, dissolved	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.010	
Mercury	<0.0001	<0.0001	0.0003	12	<0.0001	<0.0001	0.0002	12	0.001	
Mercury, dissolved	<0.0001	<0.0001	<0.0001	12	<0.0001	<0.0001	<0.0001	12	0.001	
Nitrate (as N), dissolved	0.04	<0.01	0.16	96	0.04	<0.01	0.11	98	10	
Nitrite (as N), dissolved	<0.006	<0.005	0.020	96	<0.006	<0.005	0.020	98	1	
Selenium	0.0003	<0.0002	0.0003	12	0.0003	<0.0002	0.0004	12	0.05	
Selenium, dissolved	0.0003	<0.0002	0.0003	12	0.0003	0.0002	0.0003	12	0.05	
Uranium	<0.0005	<0.0005	0.0006	12	<0.0005	<0.0005	0.0006	12	0.02	
Uranium, dissolved	<0.0005	<0.0005	0.0006	12	<0.0005	<0.0005	0.0006	12	0.02	

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Primary Organics (ug/L) **										
2,4-D	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	100	
Atrazine	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	5	
Benzene	<0.5	<0.1	<0.5	366	<0.5	<0.1	<0.5	369	5	
Benzo(a)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4	0.01	
Bromoxynil	<0.005	<0.005	<0.005	4	<0.007	<0.005	0.011	4	5	
Carbon Tetrachloride	<1.0	<0.03	<1.0	367	<1.0	<0.03	<1.0	370	2	
Chlorobenzene	<0.5	<0.03	<0.5	366	<0.5	<0.03	<0.5	369	80 (30)	
Chlorpyrifos	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	90	
Diazinon	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	20	
Dicamba	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	120	
Dichlorobenzene (1,2)	<0.5	<0.03	<0.5	366	<0.5	<0.03	<0.5	369	200 (3)	
Dichlorobenzene (1,4)	<0.5	<0.1	<0.5	366	<0.5	<0.1	<0.5	369	5 (1)	
Dichloroethane (1,2)	<0.2	<0.1	<0.5	6	<0.2	<0.1	<0.5	6	5	
Dichloroethylene (1,1)	<3.0	<0.2	<3.0	366	<3.0	<0.2	<3.0	369	14	
Dichlorophenol (2,4)	<0.06	<0.01	<0.10	4	<0.06	<0.01	<0.10	4	900 (0.3)	
Diclofop-methyl	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Dimethoate	<0.016	<0.005	<0.050	4	<0.016	<0.005	<0.050	4	20	
Diuron	<1.2	<0.2	<5.0	5	<0.2	<0.2	<0.2	4	150	
Ethyl benzene	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2		
Ethylbenzene	<0.5	<0.50	<0.5	364	<0.5	<0.50	<0.5	367	140 (1.6)	
Glyphosate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4	280	
Malathion	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4	190	
MCPA	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	100	
Methylene Chloride	<0.5	<0.4	<0.5	366	<0.5	<0.4	<0.5	369	50	
Metolachlor	<0.010	<0.005	<0.012	4	<0.010	<0.005	<0.012	4	50	
Metribuzin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4	80	
Microcystin	<0.17	<0.10	<0.50	7	<0.16	<0.10	<0.50	7		
Microcystin LR	<0.15	<0.15	<0.15	2	<0.15	<0.15	<0.15	2		
Nitritotriacetic acid	<0.2	<0.1	<0.2	5	<0.2	<0.1	<0.2	5		
Pentachlorophenol	<0.5	<0.1	<0.6	4	<0.5	<0.1	<0.6	4	60 (30)	
Phorate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	2	
Picloram	<0.018	<0.005	<0.022	4	<0.018	<0.005	<0.022	4	190	
Simazine	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4	10	
Terbufos	<0.03	<0.03	<0.03	4	<0.03	<0.03	<0.03	4	1	
Tetrachloroethylene	<0.5	<0.1	<0.5	367	<0.5	<0.1	<0.5	370	10	
Tetrachlorophenol (2,3,4,6)	<0.3	<0.1	<0.4	4	<0.3	<0.1	<0.4	4	100 (1)	
Toluene	<0.5	<0.03	<0.5	366	<0.5	<0.03	<0.5	369	60 (24)	
Trichloroethylene	<0.5	<0.2	<0.5	367	<0.5	<0.2	<0.5	370	5	
Trichlorophenol (2,4,6)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4	5 (2)	
Trifluralin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	45	
Trihalomethanes	<1.0	<1.0	<1.0	365	<1.0	<1.0	<1.0	368	100	50
Vinyl Chloride	<0.4	<0.1	<1.0	6	<0.4	<0.1	<1.0	6	2	
Xylenes	0.3	<0.2	0.3	2	<0.2	<0.2	<0.2	2		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Radionuclides Bq/L)										
Cesium-137	<0.20	<0.20	<0.20	2	<0.20	<0.20	<0.20	2	10	
Gross Alpha	<0.12	<0.12	<0.12	2	<0.12	<0.12	<0.12	2	(0.5)	
Gross Beta	<0.10	<0.10	<0.10	2	<0.10	<0.10	<0.10	2	(1.0)	
Iodine-131	<0.30	<0.30	0.30	2	<0.30	<0.30	<0.30	2	6	
Lead-210	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2	0.2	
Radium-226	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2	0.5	
Strontium-90	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2	5	
Tritium	21	<15	27	2	<15	<15	<15	2	7000	

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Inorganics (mg/L) ***										
Alkalinity, PHP (mg CaCO3/L)	<1	<1	<1	13	<1	<1	3	12		
Alkalinity, total (mg CaCO3/L)	134	112	252	52	134	113	254	52		
Aluminum	0.44	0.076	1.69	12	0.34	0.077	1.56	12	(0.1/0.2)	0.1/0.2
Aluminum, dissolved	0.059	0.004	0.200	12	0.007	<0.003	0.021	12		
Ammonia as N	<0.05	<0.05	0.06	74	<0.05	<0.05	<0.05	74		
Beryllium	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
Beryllium, dissolved	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
Bromide, dissolved	<0.005	<0.005	<0.020	96	<0.005	<0.005	<0.020	98		
Calcium	46.2	38.9	50.9	12	46.3	41.8	50.2	12		
Calcium, dissolved	46.5	43.20	51.0	12	46.6	43.00	52.0	12		
Chloride, dissolved	1.2	0.5	4.3	96	0.9	0.4	3.1	98	(250)	
Chlorine, free	<0.03	<0.03	<0.03	13	<0.03	<0.03	<0.03	12		
Cobalt	0.0003	<0.0002	0.0008	12	0.0004	<0.0002	0.0023	12		
Cobalt, dissolved	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
Copper	0.003	<0.002	0.005	12	0.003	<0.002	0.007	12	(1.0)	
Copper, dissolved	0.003	<0.002	0.004	12	<0.002	<0.002	<0.002	12	(1.0)	
Hardness, Calcium (mg CaCO3/L)	114	81	132	52	114	81	133	52		
Hardness, total (mg CaCO3/L)	177	156	211	52	177	154	211	52		
Iron	0.43	0.062	1.94	12	0.44	0.073	2.36	12	(0.3)	0.3
Iron, dissolved	0.019	<0.002	0.088	12	0.021	<0.002	0.099	12	(0.3)	0.3
Lithium	0.0038	0.0027	0.0055	12	0.0036	0.0027	0.0053	12		
Lithium, dissolved	0.0036	0.0029	0.0046	12	0.0034	0.0029	0.0043	12		
Magnesium	13.5	11.5	15.1	12	13.6	12.2	15.0	12		
Magnesium, dissolved	13.7	12.80	15.2	12	13.7	12.50	15.3	12		
Manganese	0.014	<0.002	0.044	12	0.015	0.002	0.055	12	(0.05)	
Manganese, dissolved	<0.002	<0.002	0.005	12	<0.003	<0.002	0.006	12		
Molybdenum	0.0008	0.0006	0.0013	12	0.0019	0.0007	0.0140	12		
Molybdenum, dissolved	0.0008	0.0007	0.0010	12	0.0008	0.0007	0.0009	12		
Nickel	0.0012	0.0004	0.0042	12	0.0058	0.0005	0.0596	12		
Nickel, dissolved	0.0007	0.0003	0.0021	12	0.0006	0.0003	0.0014	12		
Phosphate, Ortho (as P)	<0.02	<0.02	0.02	12	<0.02	<0.02	<0.02	12		
Phosphorus	0.05	<0.01	0.09	12	0.04	<0.01	0.10	12		
Phosphorus, dissolved	0.03	<0.01	0.06	12	0.03	<0.01	0.06	12		
Potassium	0.93	0.59	2.19	12	0.89	0.60	2.12	12		
Potassium, dissolved	0.85	0.57	1.81	12	0.83	0.54	1.73	12		
Silicon	2.55	1.72	5.79	12	2.52	1.56	5.92	12		
Silicon, dissolved	1.92	1.16	3.21	12	1.93	1.21	3.19	12		
Silver	<0.0002	<0.0002	0.0004	12	<0.0002	<0.0002	0.0004	12		
Silver, dissolved	<0.0002	<0.0002	0.0003	12	<0.0002	<0.0002	0.0003	12		
Sodium	4.4	2.7	6.2	12	4.0	2.7	6.1	12	(200)	
Sodium, dissolved	4.5	2.7	6.0	12	4.1	2.7	6.0	12		
Strontium	0.420	0.331	0.468	12	0.427	0.314	0.474	12		
Strontium, dissolved	0.414	0.305	0.456	12	0.416	0.306	0.469	12		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Inorganics (mg/L) ***										
Sulphate, dissolved	51.7	19.5	63.7	96	51.1	19.2	62.3	98	(500)	
Sulphide	<0.002	<0.002	<0.002	12	<0.002	<0.002	0.002	12	(0.05)	
Thallium	0.0001	<0.0001	0.0002	12	<0.0001	<0.0001	0.0001	12		
Thallium, dissolved	<0.0001	<0.0001	0.0001	12	<0.0001	<0.0001	0.0001	12		
Tin	<0.0002	<0.0002	0.0002	12	<0.0002	<0.0002	0.0002	12		
Tin, dissolved	<0.0002	<0.0002	<0.0002	12	<0.0002	<0.0002	<0.0002	12		
Titanium	0.0059	0.0016	0.0287	12	0.0052	0.0013	0.0263	12		
Titanium, dissolved	<0.0006	<0.0005	0.0011	12	<0.0006	<0.0005	0.0014	12		
Total Kjeldahl Nitrogen (TKN)	0.21	<0.03	0.58	12	0.19	<0.03	0.51	12		
Vanadium	0.0014	0.0006	0.0042	12	0.0014	0.0007	0.0048	12		
Vanadium, dissolved	0.0002	<0.0002	0.0003	12	0.0002	<0.0002	0.0003	12		
Zinc	0.028	<0.002	0.272	12	0.007	<0.002	0.036	12	(5)	
Zinc, dissolved	0.003	<0.002	0.007	12	<0.003	<0.002	0.008	12		
Zirconium	0.0006	0.0003	0.0017	12	0.0005	0.0002	0.0016	12		
Zirconium, dissolved	<0.0002	<0.0002	0.0004	12	<0.0002	<0.0002	0.0003	12		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
2,4-DB	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	20	
2,4-Dichlorophenol	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
2,4-DP	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
3-Methylchloranthrene	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
7,12-Dimethylbenz(a)anthracen	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
Acenaphthene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Acenaphthylene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Acetaminophen	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Acetylsalicylic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Acridine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Aldicarb	<0.7	<0.1	<2.0	6	<0.7	<0.1	<2.0	6		
Aldicarb Sulfone	<5	<5	<5	4	<5	<5	<5	4		
Aldicarb Sulfoxide	<2	<2	<2	4	<2	<2	<2	4		
Aldrin	<0.008	<0.005	<0.009	4	<0.008	<0.005	<0.009	4		
alpha-Endosulfan	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Aminocarb	<1	<1	<1	2	<1	<1	<1	2		
Aminomethyl Phosphonic Acid	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Aminopyralid	<0.02	<0.01	<0.03	2	<0.02	<0.01	<0.03	2		
Anthracene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Azinphos-methyl	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Benomyl	<5	<5	<5	2	<5	<5	<5	2		
Bentazon	<0.006	<0.005	<0.006	4	<0.006	<0.005	<0.006	4		
Benzidine	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Benzo(a)anthracene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(b)fluoranthene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Benzo(b,j,k)fluoranthene	<0.02	<0.01	<0.02	4	<0.02	<0.01	<0.02	4		
Benzo(c)phenanthrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(e)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(ghi)perylene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Benzo(k)fluoranthene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Benzoylcegonine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Bezafibrate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Bis(2-chloroethoxy)methane	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Bis(2-chloroethyl)ether	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Bis(2-chloroisopropyl)ether	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Bis(2-ethylhexyl)phthalate	<0.3	<0.1	0.4	4	<0.3	<0.1	0.4	4		
Bromacil	<0.030	<0.030	<0.030	4	<0.030	<0.030	<0.030	4		
Bromobenzene	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Bromodichloromethane	<0.5	<0.1	<0.5	367	<0.5	<0.1	<0.5	370		
Bromoform	<1.0	<0.1	<1.0	367	<1.0	<0.1	<1.0	370		
Bromomethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Bromophenyl phenyl ether (4)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Butylbenzylphthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Caffeine	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Carbamazepine	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Carbaryl	<25	<25	<25	4	<25	<25	<25	4	90	
Carbathiin	<0.175	<0.100	<0.200	4	<0.175	<0.100	<0.200	4		
Carbofuran	<25	<25	<25	2	<25	<25	<25	2	90	
Chloramphenicol	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Chloro-2-MethylPhenol (4)	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Chloro-3-methylphenol (4)	<0.6	<0.1	<0.8	4	<0.6	<0.1	<0.8	4		
Chloroethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Chloroethoxyethylene (2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chloroform	<0.5	<0.1	<0.5	367	<0.5	<0.1	<0.5	370		
Chloromethane	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Chloronaphthalene	<0.2	<0.1	<0.2	2	<0.2	<0.1	<0.2	2		
Chloronaphthalene (2)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Chlorophenol (2)	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Chlorophenyl phenyl ether (4)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Chlorothalonil	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Chlorotoluene (2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chlorotoluene (4)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Chrysene	<0.10	<0.00	<0.20	6	<0.10	<0.00	<0.20	6		
Ciprofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Clindamycin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Clodinafop acid metabolite	<0.058	<0.020	<0.070	4	<0.058	<0.020	<0.070	4		
Clodinafop-propargyl	<0.040	<0.040	<0.040	4	<0.040	<0.040	<0.040	4		
Clofibric Acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Clopyralid	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Cocaine	<0.01	<0.01	<0.01	2	<0.01	<0.01	<0.01	2		
Codeine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Cotinine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Cyanazine	<0.058	<0.050	<0.060	4	<0.058	<0.050	<0.060	4		
Desethyl Atrazine	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Desisopropyl Atrazine	<0.073	<0.050	<0.080	4	<0.073	<0.050	<0.080	4		
Dibenzo(a,h)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(a,i)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(a,l)pyrene	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Dibenzo(ah)anthracene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Dibromo-3-chloropropane (1,2)	<0.8	<0.8	<0.8	2	<0.8	<0.8	<0.8	2		
Dibromochloromethane	<0.5	<0.04	<0.5	367	<0.5	<0.04	<0.5	370		
Dibromoethane (1,2)	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dibromomethane	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dichlorobenzene (1,3)	<0.5	<0.03	<0.5	366	<0.5	<0.03	<0.5	369		
Dichloroethane (1,1)	<0.07	<0.07	<0.07	2	<0.07	<0.07	<0.07	2		
Dichloroethylene, cis (1,2)	<0.5	<0.1	<0.5	366	<0.5	<0.1	<0.5	369		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Dichloroethylene, trans (1,2)	<0.5	<0.2	<0.5	366	<0.5	<0.2	<0.5	369		
Dichloropropane (1,2)	<0.5	<0.03	<0.5	366	<0.5	<0.03	<0.5	369		
Dichloropropane (1,3)	<0.04	<0.04	<0.04	2	<0.04	<0.04	<0.04	2		
Dichloropropane (2,2)	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Dichloropropylene (1,1)	<0.06	<0.06	<0.06	2	<0.06	<0.06	<0.06	2		
Dichloropropylene cis (1,3)	<0.03	<0.03	<0.03	2	<0.03	<0.03	<0.03	2		
Dichloropropylene trans (1,3)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Diclofenac	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Dieldrin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Diethyl phthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Dimethyl phthalate	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Dimethylbenz(a)anthracene (7,12)	<0.008	<0.008	<0.008	2	<0.008	<0.008	<0.008	2		
Dimethylphenol (2,4)	<0.3	<0.2	<0.3	4	<0.3	<0.2	<0.3	4		
Di-n-butylphthalate	<0.3	<0.1	0.3	4	<0.3	<0.1	<0.3	4		
Dinitrophenol (2,4)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4		
Dinitrotoluene (2,4)	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Dinitrotoluene (2,6)	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Di-n-octyl phthalate	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Diphenylhydrazine (1,2)	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Disulfoton	<0.200	<0.200	<0.200	4	<0.200	<0.200	<0.200	4		
Enrofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
EPTC	<25	<25	<25	2	<25	<25	<25	2		
Erythromycin	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Ethalfuralin	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Ethion	<0.10	<0.10	<0.10	4	<0.10	<0.10	<0.10	4		
Ethofumesate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Fenoprofen	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Fenoxaprop-p-ethyl	<0.040	<0.040	<0.040	4	<0.040	<0.040	<0.040	4		
Fluazifop	<0.033	<0.010	<0.040	4	<0.033	<0.010	<0.040	4		
Fluoranthene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Fluorene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Fluoxetine	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Fluroxypyr	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Gemfibrozil	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Glufosinate	<0	<0	<0	2	<0	<0	<0	2		
Hexachlorobenzene	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Hexachlorobutadiene	<0.2	<0.1	<0.5	6	<0.2	<0.1	<0.5	6		
Hexachlorocyclopentadiene	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Hexachloroethane	<0.4	<0.3	<0.5	4	<0.4	<0.3	<0.5	4		
Hexaconazole	<0.019	<0.009	<0.050	4	<0.019	<0.009	<0.050	4		
Hydroxy Carbofuran (3)	<25	<25	<25	4	<25	<25	<25	4		
Ibuprofen	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Imazamethabenz-methyl	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Imazamox	<0.012	<0.009	<0.020	4	<0.012	<0.009	<0.020	4		
Imazethapyr	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Indeno(1,2,3-cd)pyrene	<0.07	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Indomethacin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Iprodione	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Isophorone	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Isopropylbenzene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Ketoprofen	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Lincomycin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Lindane (alpha-BHC)	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Lindane (gamma-BHC)	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Linuron	<0.035	<0.020	<0.040	4	<0.035	<0.020	<0.040	4		
MCPB	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
MCPP	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Meclofenamic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Metalaxyl-M	<0.025	<0.010	<0.030	4	<0.025	<0.010	<0.030	4		
Methamphetamine	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Methomyl	<1.8	<0.1	<5.0	6	<1.8	<0.1	<5.0	6		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.1	<0.5	366	<0.5	<0.1	<0.5	368		
Methyl Triclosan	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Methyl-4,6-dinitrophenol (2)	<0.6	<0.1	<0.7	4	<0.6	<0.1	<0.7	4		
Methylcholanthrene (3)	<0.007	<0.007	<0.007	2	<0.007	<0.007	<0.007	2		
Methylnaphthalene (1)	<0.006	<0.006	<0.006	2	<0.006	<0.006	<0.006	2		
Methylnaphthalene (2)	<0.006	<0.006	<0.006	2	<0.006	<0.006	<0.006	2		
MIBK	<1.0	<1.0	<1.0	364	<1.0	<1.0	<1.0	367		
Monuron	<5	<5	<5	2	<5	<5	<5	2		
N,N-diethyl-m-toluamide	<0.005	<0.005	<0.005	2	<0.005	<0.005	<0.005	2		
N,N-diethyl-m-toluamide (DEET)	<0.005	<0.005	<0.005	2	<0.005	<0.005	<0.005	2		
Naphthalene	<0.15	<0.01	<0.30	8	<0.13	<0.01	<0.30	8		
Napropamide	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Naproxen	0.009	<0.005	0.020	4	<0.005	<0.005	<0.005	4		
n-Butylbenzene	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Nitrobenzene	<0.2	<0.1	<0.2	4	<0.2	<0.1	<0.2	4		
Nitrophenol (2)	<0.3	<0.1	<0.3	4	<0.3	<0.1	<0.3	4		
Nitrophenol (4)	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
N-Nitroso-di-n-propylamine	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
N-Nitrosodiphenylamine	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Norfloxacin	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Norfluoxetine	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
n-Propylbenzene	<0.02	<0.02	<0.02	2	<0.02	<0.02	<0.02	2		
Ofloxacin	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Oxolinic acid	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		
Oxycarboxin	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
p, p' - Methoxychlor	<0.03	<0.03	<0.03	4	<0.03	<0.03	<0.03	4		
Parathion	<0.010	<0.010	<0.010	4	<0.010	<0.010	<0.010	4		
Pentoxifylline	<0.500	<0.500	<0.500	4	<0.500	<0.500	<0.500	4		
Perylene	<0.01	<0.01	0.01	4	<0.01	<0.01	<0.01	4		
Phenanthrene	<0.08	<0.01	<0.20	6	<0.07	<0.01	<0.20	6		
Phenol	<0.1	<0.1	<0.1	4	<0.1	<0.1	<0.1	4		
Pipemidic acid	<0.5	<0.5	<0.5	4	<0.5	<0.5	<0.5	4		
p-Isopropyltoluene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Propiconazole	<0.050	<0.050	<0.050	4	<0.050	<0.050	<0.050	4		
Pyrene	<0.04	<0.01	<0.10	6	<0.04	<0.01	<0.10	6		
Pyridaben	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Quinclorac	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Quizalofop	<0.030	<0.030	<0.030	4	<0.030	<0.030	<0.030	4		
Retene	0.02	<0.01	0.04	4	<0.01	<0.01	<0.01	4		
Salicylic acid	0.059	<0.025	0.160	4	0.079	<0.025	0.240	4		
sec-Butylbenzene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Styrene	<0.5	<0.02	<0.5	366	<0.5	<0.02	<0.5	369		
Sulfabenzamide	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfadimethoxine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfadoxine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamerazine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamethazine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfamethoxazole	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfapyridine	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfaquinoxaline	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Sulfathiazole	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
tert-Butylbenzene	<0.3	<0.3	<0.3	2	<0.3	<0.3	<0.3	2		
Tetrachloroethane (1,1,1,2)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Tetrachloroethane (1,1,2,2)	<1.0	<0.2	<1.0	367	<1.0	<0.2	<1.0	370		
Thiamethoxam	<0.05	<0.05	<0.05	4	<0.05	<0.05	<0.05	4		
Tolfenamic acid	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Total Organic Carbon	3.4	0.6	11.5	51	3.6	0.7	11.4	52		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	364	<1.0	<1.0	<1.0	367		
Total Volatile Organics (Unknown)	<1.0	<1.0	11.6	362	<1.0	<1.0	<1.0	365		
Triallate	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4		
Trichlorobenzene (1,2,3)	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	2		
Trichlorobenzene (1,2,4)	<0.5	<0.1	<0.5	370	<0.5	<0.1	<0.5	373		
Trichlorocarbaniide (3,4,4)	<0.025	<0.025	<0.025	4	<0.025	<0.025	<0.025	4		
Trichloroethane (1,1,1)	<0.5	<0.1	<0.5	367	<0.5	<0.1	<0.5	370		
Trichloroethane (1,1,2)	<0.06	<0.06	<0.06	2	<0.06	<0.06	<0.06	2		
Trichlorofluoromethane	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Trichloropropane (1,2,3)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Triclopyr	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	4		

7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

2016

	ROSSDALE				E.L. SMITH				Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L) ***										
Triclosan	<0.025	<0.025	<0.025	4	<0.025	<0.025	<0.025	4		
Trimethoprim	<0.020	<0.020	<0.020	4	<0.020	<0.020	<0.020	4		
Trimethylbenzene (1,2,4)	<0.1	<0.1	<0.1	2	<0.1	<0.1	<0.1	2		
Trimethylbenzene (1,3,5)	<0.2	<0.2	<0.2	2	<0.2	<0.2	<0.2	2		
Vinclozolin	<0.033	<0.010	<0.040	4	<0.033	<0.010	<0.040	4		
Xylene (1,2)	<0.5	<0.5	<0.5	364	<0.5	<0.5	<0.5	367		
Xylene (1,4)	<0.5	<0.5	<0.5	364	<0.5	<0.5	<0.5	367		
Xylene (m,p)	<0.2	<0.2	<0.2	4	<0.2	<0.2	<0.2	4		
Xylene (o)	0.09	<0.02	0.30	4	<0.02	<0.02	<0.02	4		

**7.16 Statistics on Water Quality Complaint Samples
Submitted for Laboratory Testing 2016**

MONTH	INCIDENT REATED STATISTICS													SAMPLE RELATED STATISTICS			TOTAL TESTS
	TOTAL INCIDENTS	# VALID (3)	VIOLATION INCIDENTS (2)	AESTHETIC OBJECTIVE	# SATISFIED	PERCENT SATISFIED	COMPLAINT TYPES (1)							# SAMPLES	PBR VARIANCES	VIOLATING TESTS	
							H	C	T	S	TO	TO-PL	O				
JAN	6	2	0	1	6	100%	0	1	1	2	2	0	0	11	2	0	534
FEB	11	2	0	0	11	100%	0	0	5	1	5	0	0	12	2	0	603
MAR	16	4	0	0	16	100%	0	4	2	1	9	0	0	16	2	0	835
APR	15	5	0	0	15	100%	1	2	2	4	6	0	0	17	6	0	969
MAY	18	4	0	0	18	100%	0	4	9	1	3	0	1	20	4	0	834
JUN	18	2	0	3	18	100%	0	5	7	0	5	0	1	18	2	0	707
JUL	10	3	0	0	10	100%	0	4	0	3	3	0	0	11	3	0	537
AUG	7	3	0	0	7	100%	0	3	3	1	0	0	0	13	7	0	475
SEP	20	10	0	2	20	100%	0	8	5	1	4	0	2	46	19	1	1954
OCT	18	1	0	2	18	100%	0	4	6	3	4	0	1	40	9	0	2735
NOV	21	2	0	1	21	100%	0	7	2	1	10	0	1	38	7	0	2900
DEC	9	3	0	3	9	100%	0	4	1	1	3	0	0	18	2	0	1578
YTD	169	41	0	12	169	100%	1	46	43	19	54	0	6	260	65	1	14661

(1) Complaint toes: H - Hardness, C - Color, T - Turbidity, S - Sickness, TO - Taste & Odor, TO-PL - Pipe lubricant implicated, O - Other

(2) Number of Violations: Incidents where approval levels were exceeded.

(3) Number Valid: Incidents where a test result was found to exceed specified objectives (EPCOR) and required action.

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Alkalinity phenolphthalein	1	mg CaCO3/L
Alkalinity, total	1	mg CaCO3/L
Aluminum	0.003	mg/L
Aluminum, dissolved	0.003	mg/L
Ammonia as N	0.05	mg/L
Ammonia as NH3	0.05	mg/L
Antimony	0.0002	mg/L
Antimony, dissolved	0.0002	mg/L
Arsenic	0.0002	mg/L
Arsenic, dissolved	0.0002	mg/L
Barium	0.001	mg/L
Barium, dissolved	0.001	mg/L
Benzene	0.5	ug/L
Beryllium	0.0002	mg/L
Beryllium, dissolved	0.0002	mg/L
Bicarbonate	3	mg CaCO3/L
Boron	0.002	mg/L
Boron, dissolved	0.002	mg/L
Bromate, dissolved	0.005	mg/L
Bromide, dissolved	0.005	mg/L
Bromodichloromethane	0.5	ug/L
Bromoform	1.0	ug/L
Cadmium	0.0001	mg/L
Cadmium, dissolved	0.0001	mg/L
Calcium	0.05	mg/L
Calcium, dissolved	0.05	mg/L
Carbon Tetrachloride	1.0	ug/L
Carbonate	3	mg CaCO3/L
Chlorate, dissolved	0.005	mg/L
Chloride, dissolved	0.05	mg/L
Chlorine, free	0.03	mg/L
Chlorine, total	0.03	mg/L
Chlorite, dissolved	0.005	mg/L
Chlorobenzene	0.5	ug/L
Chloroform	0.5	ug/L
Chromium	0.0002	mg/L
Chromium, dissolved	0.0002	mg/L
Cobalt	0.0002	mg/L
Cobalt, dissolved	0.0002	mg/L
Colour	1	TCU
Conductivity	0.2	uS/cm
Copper	0.002	mg/L
Copper, dissolved	0.002	mg/L
Cryptosporidium	1.0	oocysts/100L
Dibromochloromethane	0.5	ug/L
Dichlorobenzene (1,2)	0.5	ug/L
Dichlorobenzene (1,3)	0.5	ug/L
Dichlorobenzene (1,4)	0.5	ug/L
Dichloroethane (1,2)	0.5	ug/L
Dichloroethylene (1,1)	3.0	ug/L
Dichloroethylene, cis (1,2)	0.5	ug/L
Dichloroethylene, trans (1,2)	0.5	ug/L
Dichloropropane (1,2)	0.5	ug/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Dissolved Organic Carbon	0.5	mg/L
Ethylbenzene	0.5	ug/L
Fluoride, dissolved	0.05	mg/L
FPA-Intensity	0.25	N/A
Giardia	1.0	cysts/100L
Hardness, Calcium	2	mg CaCO3/L
Hardness, total	2	mg CaCO3/L
Heterotrophic Plate Count	1	CFU/mL
Iron	0.002	mg/L
Iron, dissolved	0.002	mg/L
Lead	0.0001	mg/L
Lead, dissolved	0.0001	mg/L
Lithium	0.0002	mg/L
Lithium, dissolved	0.0002	mg/L
Magnesium	0.05	mg/L
Magnesium, dissolved	0.05	mg/L
Manganese	0.002	mg/L
Manganese, dissolved	0.002	mg/L
Mercury	0.0001	mg/L
Mercury, dissolved	0.0001	mg/L
Meter TCL2	0.03	mg/L
Methyl t-Butyl Ether (MTBE)	0.5	ug/L
Methylene Chloride	0.5	ug/L
MIBK	1.0	ug/L
Microcystin	0.10	ug/L
Molybdenum	0.0002	mg/L
Molybdenum, dissolved	0.0002	mg/L
Monochloramine	0.01	mg/L
Nickel	0.0002	mg/L
Nickel, dissolved	0.0002	mg/L
Nitrate (as N), dissolved	0.005	mg/L
Nitrotriacetic acid	0.2	mg/L
Nitrite (as N), dissolved	0.005	mg/L
Observation		DESCRIPTION
Phosphate, Ortho (as P)	0.02	mg/L
Phosphorus	0.01	mg/L
Phosphorus, dissolved	0.01	mg/L
Potassium	0.05	mg/L
Potassium, dissolved	0.05	mg/L
Selenium	0.0002	mg/L
Selenium, dissolved	0.0002	mg/L
Silicon	0.01	mg/L
Silicon, dissolved	0.01	mg/L
Silver	0.0002	mg/L
Silver, dissolved	0.0002	mg/L
Sodium	0.05	mg/L
Sodium, dissolved	0.05	mg/L
Strontium	0.001	mg/L
Strontium, dissolved	0.001	mg/L
Styrene	0.5	ug/L
Sulphate, dissolved	0.05	mg/L
Tetrachloroethane (1,1,2,2)	1.0	ug/L
Tetrachloroethylene	0.5	ug/L
Thallium	0.0001	mg/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Thallium, dissolved	0.0001	mg/L
Tin	0.0002	mg/L
Tin, dissolved	0.0002	mg/L
Titanium	0.0005	mg/L
Titanium, dissolved	0.0005	mg/L
Toluene	0.5	ug/L
Total Dissolved Solids	10	mg/L
Total Suspended Solids	5	mg/L
Total Volatile Organics (NonTHM)	1.0	ug/L
Total Volatile Organics (Unknown)	1.0	ug/L
Trichlorobenzene (1,2,4)	0.5	ug/L
Trichloroethane (1,1,1)	0.5	ug/L
Trichloroethylene	0.5	ug/L
Trihalomethanes	1.0	ug/L
Turbidity	0.02	NTU
Uranium	0.0005	mg/L
Uranium, dissolved	0.0005	mg/L
UV 254 % Transmittance	1	%T/cm
Vanadium	0.0002	mg/L
Vanadium, dissolved	0.0002	mg/L
Vinyl Chloride	1.0	ug/L
Xylene (1,2)	0.5	ug/L
Xylene (1,4)	0.5	ug/L
Zinc	0.002	mg/L
Zinc, dissolved	0.002	mg/L
Zirconium	0.0002	mg/L
Zirconium, dissolved	0.0002	mg/L

Contract Lab Analysis

2,4-D	0.005	ug/L
2,4-DB	0.005	ug/L
2,4-Dichlorophenol	0.01	ug/L
2,4-DP	0.005	ug/L
3-Methylchloranthrene	0.007	ug/L
7,12-Dimethylbenz(a)anthracen	0.008	ug/L
Acenaphthene	0.007	
Acenaphthylene	0.01	
Acetaminophen	0.05	ug/L
Acetylsalicylic acid	0.01	ug/L
Acridine	0.01	
Aldicarb	0.1	ug/L
Aldicarb Sulfone	5	ug/L
Aldicarb Sulfoxide	2	ug/L
Aldrin	0.009	ug/L
alpha-Endosulfan	0.005	ug/L
Aminocarb	1	ug/L
Aminomethyl Phosphonic Acid	0.3	ug/L
Aminopyralid	0.03	ug/L
Anthracene	0.007	
Atrazine	0.005	ug/L
Azinphos-methyl	0.2	ug/L
Benomyl	5	ug/L
Bentazon	0.006	ug/L
Benzene	0.05	ug/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Benzidine	0.2	ug/L
Benzo(a)anthracene	0.005	
Benzo(a)pyrene	0.005	ug/L
Benzo(b)fluoranthene	0.1	ug/L
Benzo(b,j,k)fluoranthene	0.02	
Benzo(c)phenanthrene	0.006	
Benzo(e)pyrene	0.01	
Benzo(ghi)perylene	0.007	
Benzo(k)fluoranthene	0.1	ug/L
Benzoylcegonine	0.01	ug/L
Bezafibrate	0.1	ug/L
Bis(2-chloroethoxy)methane	0.3	ug/L
Bis(2-chloroethyl)ether	0.2	ug/L
Bis(2-chloroisopropyl)ether	0.3	ug/L
Bis(2-ethylhexyl)phthalate	0.3	ug/L
Bromacil	0.03	ug/L
Bromate, dissolved	0.003	mg/L
Bromide, dissolved	0.02	mg/L
Bromobenzene	0.03	ug/L
Bromochloroacetic acid	2	ug/L
Bromodichloromethane	0.1	ug/L
Bromoform	0.06	ug/L
Bromomethane	0.2	ug/L
Bromophenyl phenyl ether (4)	0.2	ug/L
Bromoxynil	0.005	ug/L
Butylbenzylphthalate	0.1	ug/L
Caffeine	0.02	ug/L
Carbamazepine	0.01	ug/L
Carbaryl	25	ug/L
Carbathiin	0.2	ug/L
Carbofuran	25	ug/L
Carbon Tetrachloride	0.03	ug/L
Cesium-137	0.2	Bq/L
Chloramphenicol	0.01	ug/L
Chlorate, dissolved	0.1	mg/L
Chloride, dissolved	0.05	mg/L
Chlorite, dissolved	0.2	mg/L
Chloro-2-MethylPhenol (4)	0.01	ug/L
Chloro-3-methylphenol (4)	0.8	ug/L
Chlorobenzene	0.03	ug/L
Chloroethane	0.2	ug/L
Chloroethoxyethylene (2)	0.05	ug/L
Chloroform	0.05	ug/L
Chloromethane	0.1	ug/L
Chloronaphthalene	0.2	ug/L
Chloronaphthalene (2)	0.2	ug/L
Chlorophenol (2)	0.2	ug/L
Chlorophenyl phenyl ether (4)	0.2	ug/L
Chlorothalonil	0.005	ug/L
Chlorotoluene (2)	0.05	ug/L
Chlorotoluene (4)	0.05	ug/L
Chlorpyrifos	0.005	ug/L
Chrysene	0.004	
Ciprofloxacin	0.02	ug/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Clindamycin	0.01	ug/L
Clodinafop acid metabolite	0.07	ug/L
Clodinafop-propargyl	0.04	ug/L
Clofibric Acid	0.01	ug/L
Clopyralid	0.02	ug/L
Cocaine	0.01	ug/L
Codeine	0.05	ug/L
Cotinine	0.01	ug/L
Cyanazine	0.06	ug/L
Cyanide, dissolved	0.002	mg/L
Desethyl Atrazine	0.05	ug/L
Desisopropyl Atrazine	0.08	ug/L
Diazinon	0.005	ug/L
Dibenzo(a,h)pyrene	0.01	
Dibenzo(a,i)pyrene	0.01	
Dibenzo(a,l)pyrene	0.008	
Dibenzo(ah)anthracene	0.008	
Dibromo-3-chloropropane (1,2)	0.8	ug/L
Dibromoacetic acid	2	ug/L
Dibromochloromethane	0.04	ug/L
Dibromoethane (1,2)	0.03	ug/L
Dibromomethane	0.03	ug/L
Dicamba	0.005	ug/L
Dichloroacetic acid	2	ug/L
Dichlorobenzene (1,2)	0.03	ug/L
Dichlorobenzene (1,3)	0.03	ug/L
Dichlorobenzene (1,4)	0.05	ug/L
Dichloroethane (1,1)	0.07	ug/L
Dichloroethane (1,2)	0.05	ug/L
Dichloroethylene (1,1)	0.2	ug/L
Dichloroethylene, cis (1,2)	0.1	ug/L
Dichloroethylene, trans (1,2)	0.2	ug/L
Dichlorophenol (2,4)	0.1	ug/L
Dichloropropane (1,2)	0.03	ug/L
Dichloropropane (1,3)	0.04	ug/L
Dichloropropane (2,2)	0.1	ug/L
Dichloropropylene (1,1)	0.06	ug/L
Dichloropropylene cis (1,3)	0.03	ug/L
Dichloropropylene trans (1,3)	0.05	ug/L
Diclofenac	0.01	ug/L
Diclofop-methyl	0.02	ug/L
Dieldrin	0.005	ug/L
Diethyl phthalate	0.1	ug/L
Dimethoate	0.005	ug/L
Dimethyl phthalate	0.1	ug/L
Dimethylbenz(a)anthracene (7,12)	0.008	
Dimethylphenol (2,4)	0.3	ug/L
Di-n-butylphthalate	0.3	ug/L
Dinitrophenol (2,4)	0.7	ug/L
Dinitrotoluene (2,4)	0.3	ug/L
Dinitrotoluene (2,6)	0.2	ug/L
Di-n-octyl phthalate	0.2	ug/L
Diphenylhydrazine (1,2)	0.1	ug/L
Dissolved Organic Carbon	0.5	mg/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Disulfoton	0.2	ug/L
Diuron	0.2	ug/L
Enrofloxacin	0.02	ug/L
EPTC	25	ug/L
Erythromycin	0.01	ug/L
Ethalfuralin	0.005	ug/L
Ethion	0.1	ug/L
Ethofumesate	0.005	ug/L
Ethyl benzene	0.02	ug/L
Ethylbenzene	0.02	ug/L
Fenoprofen	0.005	ug/L
Fenoxaprop-p-ethyl	0.04	ug/L
Fluazifop	0.04	ug/L
Fluoranthene	0.008	
Fluorene	0.006	
Fluoxetine	0.01	ug/L
Fluroxypyr	0.01	ug/L
Gemfibrozil	0.005	ug/L
Glufosinate	0.4	ug/L
Glyphosate	0.10	ug/L
Gross Alpha	0.12	Bq/L
Gross Beta	0.10	Bq/L
Haloacetic Acids, total (HAA5)	2	ug/L
Haloacetic Acids, total (HAA6)	2	ug/L
Hexachlorobenzene	0.1	ug/L
Hexachlorobutadiene	0.2	ug/L
Hexachlorocyclopentadiene	0.1	ug/L
Hexachloroethane	0.3	ug/L
Hexaconazole	0.009	ug/L
Hydroxy Carbofuran (3)	25	ug/L
Ibuprofen	0.005	ug/L
Imazamethabenz-methyl	0.05	ug/L
Imazamox	0.009	ug/L
Imazethapyr	0.02	ug/L
Indeno(1,2,3-cd)pyrene	0.008	
Indomethacin	0.05	ug/L
Iodine-131	0.3	Bq/L
Iprodione	0.02	ug/L
Isophorone	0.2	ug/L
Isopropylbenzene	0.1	ug/L
Ketoprofen	0.01	ug/L
Lead-210	0.02	Bq/L
Lincomycin	0.05	ug/L
Lindane (alpha-BHC)	0.005	ug/L
Lindane (gamma-BHC)	0.005	ug/L
Linuron	0.04	ug/L
Malathion	0.05	ug/L
MCPA	0.005	ug/L
MCPB	0.02	ug/L
MCPP	0.005	ug/L
Meclofenamic acid	0.01	ug/L
Mercury	0.0001	mg/L
Metalaxyl-M	0.03	ug/L
Methamphetamine	0.02	ug/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Methomyl	0.2	ug/L
Methyl t-Butyl Ether (MTBE)	0.1	ug/L
Methyl Triclosan	0.01	ug/L
Methyl-4,6-dinitrophenol (2)	0.7	ug/L
Methylcholanthrene (3)	0.007	
Methylene Chloride	0.4	ug/L
Methylnaphthalene (1)	0.006	
Methylnaphthalene (2)	0.006	
Metolachlor	0.012	ug/L
Metribuzin	0.01	ug/L
Microcystin LA	0.010	ug/L
Microcystin LR	0.010	ug/L
Microcystin RR	0.010	ug/L
Microcystin Total	0.3	ug/L
Microcystin YR	0.010	ug/L
Microcystins (as LR)	0.15	ug/L
Monobromoacetic acid	2	ug/L
Monochloroacetic acid	2	ug/L
Monuron	5	ug/L
N,N-diethyl-m-toluamide	0.005	ug/L
N,N-diethyl-m-toluamide (DEET)	0.005	ug/L
Naphthalene	0.3	ug/L
Napropamide	0.02	ug/L
Naproxen	0.005	ug/L
n-Butylbenzene	0.1	ug/L
NDMA	0.5	ng/L
Nitrate (as N), dissolved	0.01	mg/L
Nitriotriacetic acid	0.2	mg/L
Nitrite (as N), dissolved	0.005	mg/L
Nitrobenzene	0.2	ug/L
Nitrophenol (2)	0.3	ug/L
Nitrophenol (4)	0.1	ug/L
N-Nitroso-di-n-propylamine	0.2	ug/L
N-Nitrosodiphenylamine	0.1	ug/L
Norfloxacin	0.02	ug/L
Norfluoxetine	0.02	ug/L
n-Propylbenzene	0.02	ug/L
NTA	0.2	ug/L
Ofloxacin	0.02	ug/L
Oxolinic acid	0.01	ug/L
Oxycarboxin	0.05	ug/L
p, p' - Methoxychlor	0.03	ug/L
Parathion	0.01	ug/L
Pentachlorophenol	0.6	ug/L
Pentoxifylline	0.5	ug/L
Perylene	0.006	
Phenanthrene	0.007	
Phenol	0.1	ug/L
Phorate	0.005	ug/L
Picloram	0.022	ug/L
Pipemidic acid	0.5	ug/L
p-Isopropyltoluene	0.3	ug/L
Propiconazole	0.05	ug/L
Pyrene	0.007	

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Pyridaben	0.02	ug/L
Quinclorac	0.005	ug/L
Quizalofop	0.03	ug/L
Radium-226	0.005	Bq/L
Retene	0.007	
Salicylic acid	0.025	ug/L
sec-Butylbenzene	0.3	ug/L
Simazine	0.01	ug/L
Strontium-90	0.1	Bq/L
Styrene	0.02	ug/L
Sulfabenzamide	0.05	ug/L
Sulfadimethoxine	0.05	ug/L
Sulfadoxine	0.05	ug/L
Sulfamerazine	0.05	ug/L
Sulfamethazine	0.05	ug/L
Sulfamethoxazole	0.05	ug/L
Sulfapyridine	0.05	ug/L
Sulfaquinoxaline	0.05	ug/L
Sulfathiazole	0.05	ug/L
Sulphate, dissolved	0.05	mg/L
Sulphide	0.002	mg/L
Terbufos	0.03	ug/L
tert-Butylbenzene	0.3	ug/L
Tetrachloroethane (1,1,1,2)	0.05	ug/L
Tetrachloroethane (1,1,2,2)	0.2	ug/L
Tetrachloroethylene	0.06	ug/L
Tetrachlorophenol (2,3,4,6)	0.4	ug/L
Thiamethoxam	0.05	ug/L
Tolfenamic acid	0.005	ug/L
Toluene	0.03	ug/L
Total Kjeldahl Nitrogen (TKN)	0.03	mg/L
Total Organic Carbon	0.6	mg/L
Triallate	0.005	ug/L
Trichloroacetic acid	2	ug/L
Trichlorobenzene (1,2,3)	0.05	ug/L
Trichlorobenzene (1,2,4)	0.2	ug/L
Trichlorocarbanilide (3,4,4)	0.025	ug/L
Trichloroethane (1,1,1)	0.1	ug/L
Trichloroethane (1,1,2)	0.06	ug/L
Trichloroethylene	0.2	ug/L
Trichlorofluoromethane	0.2	ug/L
Trichlorophenol (2,4,6)	0.7	ug/L
Trichloropropane (1,2,3)	0.2	ug/L
Triclopyr	0.01	ug/L
Triclosan	0.025	ug/L
Trifluralin	0.005	ug/L
Trihalomethanes	0.1	ug/L
Trimethoprim	0.02	ug/L
Trimethylbenzene (1,2,4)	0.1	ug/L
Trimethylbenzene (1,3,5)	0.2	ug/L
Tritium	15	Bq/L
Vinclozolin	0.04	ug/L
Vinyl Chloride	0.06	ug/L
Xylene (m,p)	0.2	ug/L

7.17 METHOD DETECTION LIMITS

Analyte	MDL	Unit
Xylene (o)	0.02	ug/L
Xylenes	0.1	ug/L

7.18 EXPLANATION OF NOTATIONS USED

Concentrations are reported as mg/L unless otherwise indicated.
Alkalinity and Hardness (Ca and Total) are reported as mg CaCO₃/L

%T	= % Transmission
- ve	= Absent
+ ve	= Present
µg/L	= Micrograms per litre (1 µg/L = 0.001 mg/L)
µS/cm	= Microsiemens per centimeter (unit of conductivity)
2/Y	= Twice per Year
AO	= Aesthetic Objective
Bq/L	= Becquerel(s) per litre (unit of radionuclide concentration)
CCPP	= Calcium Carbonate Precipitation Potential
CFU	= Colony Forming Units
Comm	= Commercial Laboratories
D	= Daily
EWSI	= EPCOR Water Services Inc.
FPA	= Flavour Profile Analysis
GCDWQ	= Guidelines for Canadian Drinking Water Quality
GM	= Geometric Mean
HPC	= Heterotrophic Plate Count
inoff	= Inoffensive (no objectionable odour)
M	= Monthly
MAC	= Maximum Acceptable Concentration
MDL	= Method Detection Limit
N/A	= Not Available
ND	= Not Detected
NTU	= Nephelometric Turbidity Units
PA	= Presence/Absence Testing
PBR	= Performance Based Rates
PHP	= phenolphthalein
PLPH	= Provincial Laboratory of Public Health
ppb	= Parts Per Billion
ppm	= Parts Per Million
Q	= Quarterly
QA	= Quality Assurance
QC	= Quality Control
TCU	= True Colour Units
TDS	= Total Dissolved Solids
TOC	= Total Organic Carbon
WL	= Water Laboratory
WTP	= Water Treatment Plant