

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
January															
Rossdale Raw (MPN/100mL)	33	0	0.0	76	1	291	0	0.0	8	1	39	1	15.7	15.7	15.7
E.L. Smith Raw (MPN/100mL)	4	0	0.0	43	25	82	0	0.0	1	1	1	1	15.2	15.2	15.2
Raw River Water Entering the Treatment Plants	37	0	0.0	73	1	291	0	0.0	7	1	39	2	15.4	15.2	15.7
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.22	0.04	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.20	0.02	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.21	0.02	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.29	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.31	0.04	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.30	0.03	1.00
February															
Rossdale Raw (MPN/100mL)	30	0	0.0	95	1	387	0	0.0	12	1	58	1	10.7	10.7	10.7
E.L. Smith Raw (MPN/100mL)	5	0	0.0	41	20	64	0	0.0	1	1	1	1	8.49	8.49	8.49
Raw River Water Entering the Treatment Plants	35	0	0.0	87	1	387	0	0.0	10	1	58	2	9.61	8.49	10.7
Rossdale Treated (PA/100mL)	28	0	0.0				0	0.0				28	0.25	0.03	1.00
E.L. Smith Treated (PA/100mL)	28	0	0.0				0	0.0				28	0.20	0.03	1.00
Water Entering the Plant Reservoir	56	0	0.0				0	0.0				56	0.23	0.03	1.00
Rossdale Reservoir (PA/100mL)	28	0	0.0				0	0.0				28	0.28	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	28	0	0.0				0	0.0				28	0.21	0.03	1.00
Treated Water Entering the Distribution System	56	0	0.0				0	0.0				56	0.25	0.03	1.00

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
March															
Rossdale Raw (MPN/100mL)	32	0	0.0	373	1	1,990	0	0.0	31	1	96	1	30.0	30.0	30.0
E.L. Smith Raw (MPN/100mL)	5	0	0.0	108	12	236	0	0.0	7	1	28	1	32.6	32.6	32.6
Raw River Water Entering the Treatment Plants	37	0	0.0	337	1	1,990	0	0.0	28	1	96	2	31.3	30.0	32.6
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.52	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.35	0.04	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.44	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.45	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.45	0.04	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.45	0.03	1.00
April															
Rossdale Raw (MPN/100mL)	31	0	0.0	76	1	921	0	0.0	9	1	105	1	311	311	311
E.L. Smith Raw (MPN/100mL)	4	0	0.0	18	13	20	0	0.0	1	1	1	1	311	311	311
Raw River Water Entering the Treatment Plants	35	0	0.0	70	1	921	0	0.0	8	1	105	2	311	311	311
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.48	0.02	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.34	0.05	1.00
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.41	0.02	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.60	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.33	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.46	0.03	1.00

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
May															
Rossdale Raw (MPN/100mL)	31	0	0.0	506	1	3,230	0	0.0	69	1	980	1	176	176	176
E.L. Smith Raw (MPN/100mL)	4	0	0.0	248	52	649	0	0.0	12	2	34	1	114	114	114
Raw River Water Entering the Treatment Plants	35	0	0.0	477	1	3,230	0	0.0	62	1	980	2	145	114	176
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.54	0.02	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.35	0.02	1.00
Water Entering the Plant Reservoir	61	0	0.0				0	0.0				61	0.45	0.02	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.52	0.02	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.50	0.02	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.51	0.02	1.00
June															
Rossdale Raw (MPN/100mL)	31	0	0.0	519	1	1,730	0	0.0	27	1	105	1	261	261	261
E.L. Smith Raw (MPN/100mL)	6	0	0.0	428	121	1,300	0	0.0	36	4	76	1	268	268	268
Raw River Water Entering the Treatment Plants	37	0	0.0	504	1	1,730	0	0.0	28	1	105	2	265	261	268
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.65	0.02	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.43	0.02	1.00
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.54	0.02	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.50	0.02	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.53	0.02	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.51	0.02	1.00

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
July															
Rossdale Raw (MPN/100mL)	33	0	0.0	1,285	1	5,970	0	0.0	91	1	646	1	38.6	38.6	38.6
E.L. Smith Raw (MPN/100mL)	4	0	0.0	1,089	308	2,420	0	0.0	23	10	60	1	38.5	38.5	38.5
Raw River Water Entering the Treatment Plants	37	0	0.0	1,264	1	5,970	0	0.0	84	1	646	2	38.5	38.5	38.6
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.66	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.50	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.58	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.68	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.64	0.03	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.66	0.03	1.00
August															
Rossdale Raw (MPN/100mL)	32	0	0.0	289	1	980	0	0.0	21	1	74	1	70.4	70.4	70.4
E.L. Smith Raw (MPN/100mL)	4	0	0.0	376	194	517	0	0.0	10	5	23	1	71.3	71.3	71.3
Raw River Water Entering the Treatment Plants	36	0	0.0	299	1	980	0	0.0	20	1	74	2	70.8	70.4	71.3
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.76	0.04	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.71	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.73	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.88	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.62	0.03	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.75	0.03	1.00

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
September															
Rossdale Raw (MPN/100mL)	30	0	0.0	565	1	4,290	0	0.0	37	1	365	1	58.7	58.7	58.7
E.L. Smith Raw (MPN/100mL)	6	0	0.0	129	12	249	0	0.0	12	2	30	1	19.5	19.5	19.5
Raw River Water Entering the Treatment Plants	36	0	0.0	492	1	4,290	0	0.0	33	1	365	2	39.1	19.5	58.7
Rossdale Treated (PA/100mL)	29	0	0.0				0	0.0				29	0.52	0.03	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.42	0.03	1.00
Water Entering the Plant Reservoir	59	0	0.0				0	0.0				59	0.47	0.03	1.00
Rossdale Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.68	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.43	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.55	0.03	1.00
October															
Rossdale Raw (MPN/100mL)	30	0	0.0	222	47	1,990	0	0.0	12	1	116	1	27.5	27.5	27.5
E.L. Smith Raw (MPN/100mL)	4	0	0.0	152	114	210	0	0.0	5	3	7	1	14.6	14.6	14.6
Raw River Water Entering the Treatment Plants	34	0	0.0	214	47	1,990	0	0.0	11	1	116	2	21.0	14.6	27.5
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.81	0.03	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.61	0.03	1.00
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.71	0.03	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.75	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.61	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.68	0.03	1.00

**2.2.1 Bacteriological Data: Water Treatment Plants
2021**

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
November															
Rossdale Raw (MPN/100mL)	31	0	0.0	162	1	866	0	0.0	6	1	44	1	50.7	50.7	50.7
E.L. Smith Raw (MPN/100mL)	4	0	0.0	109	91	116	0	0.0	1	1	2	1	39.8	39.8	39.8
Raw River Water Entering the Treatment Plants	35	0	0.0	156	1	866	0	0.0	5	1	44	2	45.3	39.8	50.7
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.39	0.03	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.29	0.03	1.00
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.34	0.03	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.40	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.22	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.31	0.03	1.00
December															
Rossdale Raw (MPN/100mL)	32	0	0.0	99	1	238	0	0.0	7	1	40	1	24.4	24.4	24.4
E.L. Smith Raw (MPN/100mL)	5	0	0.0	90	43	118	0	0.0	1	1	2	1	27.9	27.9	27.9
Raw River Water Entering the Treatment Plants	37	0	0.0	98	1	238	0	0.0	7	1	40	2	26.1	24.4	27.9
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.27	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.36	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.31	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.35	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.26	0.04	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.31	0.03	1.00

PA = present or absent, MPN = most probable number, cATP = cellular adenosine triphosphate

2.2.2 Bacteriological Data: Distribution System
December 2021

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)			
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max
January									
FIELD DISTRIBUTION	108	0	0.0	0	0.0	62	0.15	0.03	0.76
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	53	0	0.0	0	0.0	53	0.15	0.01	0.38
FIELD RESERVOIR - PLPH (duplicate-not counted)	49	0	0.0	0	0.0				
Monthly	221	0	0.0	0	0.0	115	0.15	0.01	0.76
February									
FIELD DISTRIBUTION	111	0	0.0	0	0.0	61	0.17	0.03	1.83
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	57	0	0.0	0	0.0	57	0.26	0.05	5.38
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	228	0	0.0	0	0.0	118	0.20	0.03	5.38
March									
FIELD DISTRIBUTION	110	0	0.0	0	0.0	61	0.15	0.03	0.39
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	69	0	0.0	0	0.0	69	0.19	0.03	0.55
FIELD RESERVOIR - PLPH (duplicate-not counted)	65	0	0.0	0	0.0				
Monthly	239	0	0.0	0	0.0	130	0.18	0.03	0.55
April									
FIELD DISTRIBUTION	97	0	0.0	0	0.0	62	0.08	0.01	0.19
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	58	0	0.0	0	0.0	58	0.13	0.01	0.30
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	215	0	0.0	0	0.0	120	0.10	0.01	0.30

2.2.2 Bacteriological Data: Distribution System
December 2021

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)			
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max
May									
FIELD DISTRIBUTION	101	0	0.0	0	0.0	60	0.07	0.02	0.15
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	57	0	0.0	0	0.0	57	0.12	0.02	0.66
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	218	0	0.0	0	0.0	117	0.10	0.02	0.66
June									
FIELD DISTRIBUTION	103	0	0.0	0	0.0	62	0.14	0.03	0.56
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	71	0	0.0	0	0.0	71	0.12	0.03	0.83
FIELD RESERVOIR - PLPH (duplicate-not counted)	65	0	0.0	0	0.0				
Monthly	234	0	0.0	0	0.0	133	0.13	0.03	0.83
July									
FIELD DISTRIBUTION	99	0	0.0	0	0.0	62	0.21	0.03	0.70
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	56	0	0.0	0	0.0	56	0.42	0.03	3.32
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	215	0	0.0	0	0.0	118	0.31	0.03	3.32
August									
FIELD DISTRIBUTION	110	1	0.9	0	0.0	60	0.14	0.03	0.51
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	72	0	0.0	0	0.0	72	0.21	0.02	1.01
FIELD RESERVOIR - PLPH (duplicate-not counted)	65	0	0.0	0	0.0				
Monthly	242	1	0.4	0	0.0	132	0.18	0.02	1.01

2.2.2 Bacteriological Data: Distribution System
December 2021

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)			
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max
September									
FIELD DISTRIBUTION	111	1	0.9	0	0.0	62	0.16	0.03	0.61
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	56	0	0.0	0	0.0	56	0.17	0.03	0.80
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	227	1	0.4	0	0.0	118	0.17	0.03	0.80
October									
FIELD DISTRIBUTION	99	1	1.0	0	0.0	60	0.13	0.03	0.35
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	53	0	0.0	0	0.0	53	0.17	0.03	0.76
FIELD RESERVOIR - PLPH (duplicate-not counted)	46	0	0.0	0	0.0				
Monthly	212	1	0.5	0	0.0	113	0.14	0.03	0.76
November									
FIELD DISTRIBUTION	97	0	0.0	0	0.0	60	0.12	0.03	0.28
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	61	0	0.0	0	0.0	61	0.14	0.03	0.34
FIELD RESERVOIR - PLPH (duplicate-not counted)	59	0	0.0	0	0.0				
Monthly	218	0	0.0	0	0.0	121	0.13	0.03	0.34
December									
FIELD DISTRIBUTION	95	0	0.0	0	0.0	61	0.09	0.03	0.49
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	48	0	0.0	0	0.0	48	0.12	0.03	0.43
FIELD RESERVOIR - PLPH (duplicate-not counted)	48	0	0.0	0	0.0				
Monthly	203	0	0.0	0	0.0	109	0.11	0.03	0.49
Year to Date	2,672	3	0.1	0	0.0	1,444	0.16	0.01	5.38

2.2.2 Bacteriological Data: Distribution System
December 2021

Guidelines for Canadian Drinking Water Quality recommend 190 bacteriological samples for a city the size of Edmonton. Total Coliform and E.coli testing is required in the AEP Approval. At least 95 of the 190 samples must be tested at ProvLab each month according to our Operations Program.

Testing conducted by Laboratory for Provincial Laboratory for Public Health (ProvLAB) are labelled with PLPH.

**2.2.2 Bacteriological Data: Distribution System
December 2021**

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)				
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max	
Samples from Complaints										
January	4	0	0.0	0	0.0	4	0.24	0.13	0.29	
February	4	0	0.0	0	0.0	4	0.13	0.12	0.14	
March	4	0	0.0	0	0.0	4	0.11	0.05	0.24	
April	5	0	0.0	0	0.0	5	0.11	0.06	0.14	
May	8	0	0.0	0	0.0	8	0.09	0.03	0.17	
June	15	0	0.0	0	0.0	15	0.33	0.02	2.44	
July	25	0	0.0	0	0.0	25	0.29	0.03	1.10	
August	21	0	0.0	0	0.0	21	0.16	0.03	0.34	
September	11	0	0.0	0	0.0	11	0.15	0.03	0.33	
October	14	0	0.0	0	0.0	14	0.20	0.06	0.45	
November	13	0	0.0	0	0.0	13	0.15	0.04	0.32	
December	10	0	0.0	0	0.0	10	0.54	0.06	2.26	
	Year to Date	134	0	0.0	0	0.0	134	0.22	0.02	2.44
Samples from Depressurizations										
January	53	0	0.0	0	0.0					
February	107	0	0.0	0	0.0					
March	48	0	0.0	0	0.0					
April	44	0	0.0	0	0.0					
May	53	0	0.0	0	0.0					
June	86	0	0.0	0	0.0					
July	69	2	2.9	0	0.0					
August	89	0	0.0	0	0.0					
September	79	0	0.0	0	0.0					
October	96	2	2.1	0	0.0					
November	118	0	0.0	0	0.0					
December	74	0	0.0	0	0.0					
	Year to Date	916	4	0.4	0	0.0				