

**2.2.1 Bacteriological Data: Water Treatment Plants
2022**

	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)	32			81	1	387			9	1	51	1	10.7	10.7	10.7
E.L. Smith Raw (MPN/100mL)	5			44	31	68			1	1	2	1	15.0	15.0	15.0
Raw River Water Entering the Treatment Plants	37			76	1	387			8	1	51	2	12.9	10.7	15.0
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.61	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.43	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.52	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.66	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.49	0.03	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.58	0.03	1.00
February															
Rossdale Raw (MPN/100mL)	29			188	1	1,990			12	1	58	1	24.8	24.8	24.8
E.L. Smith Raw (MPN/100mL)	5			57	19	196			1	1	3	1	29.6	29.6	29.6
Raw River Water Entering the Treatment Plants	34			169	1	1,990			10	1	58	2	27.2	24.8	29.6
Rossdale Treated (PA/100mL)	28	0	0.0				0	0.0				28	0.48	0.03	1.00
E.L. Smith Treated (PA/100mL)	28	0	0.0				0	0.0				28	0.40	0.03	1.00
Water Entering the Plant Reservoir	56	0	0.0				0	0.0				56	0.44	0.03	1.00
Rossdale Reservoir (PA/100mL)	28	0	0.0				0	0.0				28	0.61	0.04	1.00
E.L. Smith Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.22	0.03	1.00
Treated Water Entering the Distribution System	57	0	0.0				0	0.0				57	0.41	0.03	1.00

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	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			1,105	1	7,310			40	1	161	1	11.5	11.5	11.5
E.L. Smith Raw (MPN/100mL)	5			240	8	722			5	1	20	1	15.2	15.2	15.2
Raw River Water Entering the Treatment Plants	37			988	1	7,310			35	1	161	2	13.3	11.5	15.2
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.70	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.62	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.66	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.76	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.53	0.03	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.64	0.03	1.00
April															
Rossdale Raw (MPN/100mL)	31			356	1	2,420			26	1	276	1	78.4	78.4	78.4
E.L. Smith Raw (MPN/100mL)	5			148	43	291			1	1	2	1	91.7	91.7	91.7
Raw River Water Entering the Treatment Plants	36			327	1	2,420			23	1	276	2	85.0	78.4	91.7
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.75	0.03	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.67	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	0.72	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.75	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.73	0.03	1.00

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	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)	32			333	1	2,670			25	1	158	1	269	269	269
E.L. Smith Raw (MPN/100mL)	4			91	71	121			2	1	2	1	78.2	78.2	78.2
Raw River Water Entering the Treatment Plants	36			306	1	2,670			22	1	158	2	174	78.2	269
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.76	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.61	0.02	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.69	0.02	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.79	0.02	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.80	0.03	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.79	0.02	1.00
June															
Rossdale Raw (MPN/100mL)	30			2,510	35	15,400			128	3	654	1	178	178	178
E.L. Smith Raw (MPN/100mL)	5			882	88	1,730			44	2	84	1	182	182	182
Raw River Water Entering the Treatment Plants	35			2,278	35	15,400			116	2	654	2	180	178	182
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.82	0.07	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.64	0.03	1.00
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.73	0.03	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.77	0.07	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.82	0.03	1.00
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.79	0.03	1.00

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	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)	31			4,014	186	48,400			232	4	3,720	1	268	268	268
E.L. Smith Raw (MPN/100mL)	4			1,617	727	4,200			57	7	150	0			
Raw River Water Entering the Treatment Plants	35			3,740	186	48,400			212	4	3,720	1	268	268	268
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.92	0.06	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.80	0.03	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.86	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	0.88	0.05	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.88	0.03	1.00
August															
Rossdale Raw (MPN/100mL)	31			466	75	4,370			24	3	170	1	49.2	49.2	49.2
E.L. Smith Raw (MPN/100mL)	5			324	172	613			10	5	14	1	55.4	55.4	55.4
Raw River Water Entering the Treatment Plants	36			446	75	4,370			22	3	170	2	52.3	49.2	55.4
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.70	0.03	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.86	0.08	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.78	0.03	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.82	0.03	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.89	0.06	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.85	0.03	1.00

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2022**

	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			180	34	921			23	1	194	1	58.4	58.4	58.4
E.L. Smith Raw (MPN/100mL)	4			231	79	579			70	6	248	1	81.8	81.8	81.8
Raw River Water Entering the Treatment Plants	34			186	34	921			29	1	248	2	70.1	58.4	81.8
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.68	0.15	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.60	0.12	1.04
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.64	0.12	1.04
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.66	0.11	1.33
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.76	0.15	1.17
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.71	0.11	1.33
October															
Rossdale Raw (MPN/100mL)	31			193	62	1,990			57	1	1,550	1	45.3	45.3	45.3
E.L. Smith Raw (MPN/100mL)	4			206	172	248			10	2	21	1	57.5	57.5	57.5
Raw River Water Entering the Treatment Plants	35			194	62	1,990			52	1	1,550	2	51.4	45.3	57.5
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.90	0.16	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.50	0.10	1.00
Water Entering the Plant Reservoir	61	0	0.0				0	0.0				61	0.70	0.10	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.92	0.15	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.61	0.11	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.76	0.11	1.00

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2022**

	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)	29			272	75	921			23	1	126	1	23.1	23.1	23.1
E.L. Smith Raw (MPN/100mL)	4			209	166	261			9	5	15	0			
Raw River Water Entering the Treatment Plants	33			264	75	921			21	1	126	1	23.1	23.1	23.1
Rossdale Treated (PA/100mL)	29	0	0.0				0	0.0				29	0.73	0.11	1.48
E.L. Smith Treated (PA/100mL)	29	0	0.0				0	0.0				29	0.58	0.10	1.33
Water Entering the Plant Reservoir	58	0	0.0				0	0.0				58	0.66	0.10	1.48
Rossdale Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.82	0.10	1.62
E.L. Smith Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.55	0.10	1.63
Treated Water Entering the Distribution System	58	0	0.0				0	0.0				58	0.68	0.10	1.63
December															
Rossdale Raw (MPN/100mL)	32			171	1	548			6	1	18	2	24.2	21.0	27.3
E.L. Smith Raw (MPN/100mL)	5			201	108	261			6	1	17	1	36.4	36.4	36.4
Raw River Water Entering the Treatment Plants	37			175	1	548			6	1	18	3	28.2	21.0	36.4
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.81	0.10	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.64	0.10	1.00
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.72	0.10	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.67	0.10	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.41	0.10	1.00
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.54	0.10	1.00

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

2.2.2 Bacteriological Data: Distribution System
December 2022

	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	91	0	0.0	0	0.0	60	0.09	0.03	0.37
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	50	0	0.0	0	0.0	50	0.07	0.02	0.20
FIELD RESERVOIR - PLPH (duplicate-not counted)	48	0	0.0	0	0.0				
Monthly	201	0	0.0	0	0.0	110	0.09	0.02	0.37
February									
FIELD DISTRIBUTION	89	0	0.0	0	0.0	57	0.09	0.03	0.28
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0	3	0.13	0.13	0.13
FIELD RESERVOIR	48	0	0.0	0	0.0	48	0.11	0.03	0.30
FIELD RESERVOIR - PLPH (duplicate-not counted)	48	0	0.0	0	0.0				
Monthly	197	0	0.0	0	0.0	108	0.10	0.03	0.30
March									
FIELD DISTRIBUTION	85	0	0.0	0	0.0	61	0.09	0.03	0.37
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	60	0	0.0	0	0.0	60	0.09	0.03	0.58
FIELD RESERVOIR - PLPH (duplicate-not counted)	59	0	0.0	0	0.0				
Monthly	205	0	0.0	0	0.0	121	0.09	0.03	0.58
April									
FIELD DISTRIBUTION	94	0	0.0	0	0.0	61	0.18	0.03	1.26
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	55	0	0.0	0	0.0	55	0.09	0.03	0.37
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	209	0	0.0	0	0.0	116	0.14	0.03	1.26

**2.2.2 Bacteriological Data: Distribution System
December 2022**

	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	98	0	0.0	0	0.0	58	0.09	0.03	0.24
FIELD DISTRIBUTION - PLPH	58	0	0.0	0	0.0				
FIELD RESERVOIR	64	0	0.0	0	0.0	64	0.11	0.02	0.73
FIELD RESERVOIR - PLPH (duplicate-not counted)	61	0	0.0	0	0.0				
Monthly	220	0	0.0	0	0.0	122	0.10	0.02	0.73
June									
FIELD DISTRIBUTION	88	0	0.0	0	0.0	56	0.12	0.03	0.87
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	48	0	0.0	0	0.0	48	0.21	0.04	1.04
FIELD RESERVOIR - PLPH (duplicate-not counted)	59	0	0.0	0	0.0				
Monthly	196	0	0.0	0	0.0	104	0.16	0.03	1.04
July									
FIELD DISTRIBUTION	87	0	0.0	0	0.0	56	0.39	0.03	1.66
FIELD DISTRIBUTION - PLPH	56	0	0.0	0	0.0				
FIELD RESERVOIR	52	0	0.0	0	0.0	52	1.21	0.03	4.49
FIELD RESERVOIR - PLPH (duplicate-not counted)	63	0	0.0	0	0.0				
Monthly	195	0	0.0	0	0.0	108	0.85	0.03	4.49
August									
FIELD DISTRIBUTION	96	1	1.0	0	0.0	58	0.29	0.03	1.08
FIELD DISTRIBUTION - PLPH	57	1	1.8	0	0.0				
FIELD RESERVOIR	66	0	0.0	0	0.0	66	0.64	0.03	5.14
FIELD RESERVOIR - PLPH (duplicate-not counted)	65	1	1.5	0	0.0				
Monthly	219	3	1.4	0	0.0	124	0.47	0.03	5.14

2.2.2 Bacteriological Data: Distribution System

December 2022

	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	145	0	0.0	0	0.0	56	0.66	0.14	3.92
FIELD DISTRIBUTION - PLPH	56	0	0.0	0	0.0				
FIELD RESERVOIR	53	0	0.0	0	0.0	53	0.50	0.11	1.64
FIELD RESERVOIR - PLPH (duplicate-not counted)	51	0	0.0	0	0.0				
Monthly	254	0	0.0	0	0.0	109	0.58	0.11	3.92
October									
FIELD DISTRIBUTION	154	0	0.0	0	0.0	56	0.22	0.11	0.63
FIELD DISTRIBUTION - PLPH	56	0	0.0	0	0.0				
FIELD RESERVOIR	56	0	0.0	0	0.0	56	0.22	0.10	0.58
FIELD RESERVOIR - PLPH (duplicate-not counted)	55	0	0.0	0	0.0				
Monthly	266	0	0.0	0	0.0	112	0.22	0.10	0.63
November									
FIELD DISTRIBUTION	139	0	0.0	0	0.0	56	0.42	0.10	1.49
FIELD DISTRIBUTION - PLPH	56	0	0.0	0	0.0				
FIELD RESERVOIR	58	0	0.0	0	0.0	58	0.44	0.10	2.42
FIELD RESERVOIR - PLPH (duplicate-not counted)	57	0	0.0	0	0.0				
Monthly	253	0	0.0	0	0.0	114	0.43	0.10	2.42
December									
FIELD DISTRIBUTION	137	0	0.0	0	0.0	56	0.49	0.11	3.26
FIELD DISTRIBUTION - PLPH	28	0	0.0	0	0.0				
FIELD RESERVOIR	50	0	0.0	0	0.0	50	0.16	0.10	0.42
FIELD RESERVOIR - PLPH (duplicate-not counted)	37	0	0.0	0	0.0				
Monthly	215	0	0.0	0	0.0	106	0.34	0.10	3.26
Year to Date	2,630	3	0.1	0	0.0	1,354	0.34	0.02	5.14

2.2.2 Bacteriological Data: Distribution System

December 2022

Guidelines for Canadian Drinking Water Quality recommend 195 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 195 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 2022**

	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	0.21	0.03	0.68	
February	10	0	0.0	0	0.0	10	0.19	0.03	0.50	
March	12	0	0.0	0	0.0	12	0.17	0.07	0.30	
April	7	0	0.0	0	0.0	7	0.12	0.04	0.21	
May	11	0	0.0	0	0.0	11	0.12	0.04	0.33	
June	9	0	0.0	0	0.0	9	0.14	0.04	0.29	
July	12	0	0.0	0	0.0	12	0.28	0.04	0.84	
August	5	0	0.0	0	0.0	5	0.30	0.18	0.53	
September	8	0	0.0	0	0.0	8	0.41	0.13	0.74	
October	9	0	0.0	0	0.0	9	0.20	0.10	0.33	
November	5	0	0.0	0	0.0	5	0.13	0.12	0.14	
December	5	0	0.0	0	0.0	5				
	Year to Date	97	0	0.0	0	0.0	97	0.21	0.03	0.84
Samples from Depressurizations										
January	67	0	0.0	0	0.0					
February	49	0	0.0	0	0.0					
March	58	0	0.0	0	0.0					
April	53	0	0.0	0	0.0					
May	83	0	0.0	0	0.0					
June	69	0	0.0	0	0.0					
July	78	1	1.3	0	0.0					
August	88	0	0.0	0	0.0					
September	86	0	0.0	0	0.0					
October	68	0	0.0	0	0.0					
November	58	0	0.0	0	0.0					
December	55	0	0.0	0	0.0					
	Year to Date	812	1	0.1	0	0.0				