

**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

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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	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

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

**2.2.2 Bacteriological Data: Distribution System
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	0.20	0.03	1.00
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	53	0	0.0	0	0.0	53	0.35	0.01	1.00
FIELD RESERVOIR - PLPH (duplicate-not counted) *	49	0	0.0	0	0.0				
Monthly	270	0	0.0	0	0.0	115	0.27	0.01	0.01
February									
FIELD DISTRIBUTION	111	0	0.0	0	0.0	61	0.23	0.03	1.83
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	57	0	0.0	0	0.0	57	0.44	0.05	5.38
FIELD RESERVOIR - PLPH (duplicate-not counted) *	52	0	0.0	0	0.0				
Monthly	280	0	0.0	0	0.0	118	0.33	0.03	0.03
March									
FIELD DISTRIBUTION	110	0	0.0	0	0.0	61	0.45	0.03	1.00
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	69	0	0.0	0	0.0	69	0.43	0.03	1.00
FIELD RESERVOIR - PLPH (duplicate-not counted) *	65	0	0.0	0	0.0				
Monthly	304	0	0.0	0	0.0	130	0.44	0.03	0.03
April									
FIELD DISTRIBUTION	97	0	0.0	0	0.0	62	0.38	0.01	1.00
FIELD DISTRIBUTION - PLPH	60	0	0.0	0	0.0				
FIELD RESERVOIR	58	0	0.0	0	0.0	58	0.40	0.01	1.00
FIELD RESERVOIR - PLPH (duplicate-not counted) *	52	0	0.0	0	0.0				
Monthly	267	0	0.0	0	0.0	120	0.39	0.01	0.01
Year to Date	1,121	0	0.0	0	0.0	483	0.36	0.01	5.38

2.2.2 Bacteriological Data: Distribution System

2021

BACTERIOLOGICAL SAMPLING AND TESTING REQUIREMENTS:

Testing for bacterial (Total Coliform and *E.coli*) in the distribution system is an AEP Approval requirement. The approval states that grab samples in the quantity specified in the Guidelines for Canadian Drinking Water Quality be collected at regular intervals throughout the month. For a city the size of Edmonton (population 1,047,000 in 2020) the guidelines recommend a minimum of 195 bacteriological samples. At least 95 of the 195 samples must be tested at the Provincial Laboratory for Public Health (PLPH) each month according to the Operations Program. The remainder are tested at the EPCOR Water Laboratory (Accredited to ISO/IEC 17015). Samples collected weekly from the thirteen field reservoirs and tested in the EPCOR Water Laboratory are included in the count. Duplicate samples from the thirteen field reservoirs are collected on the same day and tested at the Provincial Laboratory for Public Health are not included in the count.

TABLE DEFINITIONS:

- PLPH - indicates that these tests were conducted by Provincial Laboratory for Public Health (ProvLAB). All other samples were tested at the EPCOR Water Laboratory (accredited to ISO/IEC17025)
- FIELD DISTRIBUTION - includes samples collected from recreation centres, other public facilities, convenience stores, dead end locations and EPCOR employee homes and tested at the EPCOR Water Laboratory.
- FIELD DISTRIBUTION - PLPH - includes samples collected from 30 Edmonton Fire Stations twice monthly and tested at PLPH
- FIELD RESERVOIR - includes weekly samples collected from the thirteen field reservoirs in the distribution system and tested at the EPCOR Water Laboratory
- FIELD RESERVOIR - includes duplicate weekly samples collected from the thirteen field reservoirs in the distribution system and tested at PLPH

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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	0.13
February	4	0	0.0	0	0.0	4	0.13	0.12	0.12
March	4	0	0.0	0	0.0	4	0.11	0.05	0.05
April	5	0	0.0	0	0.0	5	0.28	0.06	0.06
Year to Date	17	0	0.0	0	0.0	17	0.20	0.05	1.00
Samples from Depressurizations									
January	53	0	0.0	0	0.0	0			
February	107	0	0.0	0	0.0	0			
March	48	0	0.0	0	0.0	0			
April	44	0	0.0	0	0.0	0			
Year to Date	252	0	0.0	0	0.0	0			