

**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	0.31	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	0.26	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

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
Year to Date	550	0	0.0	0	0.0	233	0.30	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 972,000 in 2019) the guidelines recommend a minimum of 190 bacteriological samples. At least 95 of the 190 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

**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
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
Year to Date		8	0	0.0	0	0.0	8	0.19	0.12	0.29
Samples from Depressurizations										
January		53	0	0.0	0	0.0	0			
February		107	0	0.0	0	0.0	0			
Year to Date		160	0	0.0	0	0.0	0			