

2.2.1 Bacteriological Data: Water Treatment Plants

2024

	Coliforms, total					E. coli					cATP (pg/mL)				
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
<b>January</b>															
Rossdale Raw (MPN/100mL)	32			133	1	517			13	1	40	1	44.7	44.7	44.7
E.L. Smith Raw (MPN/100mL)	5			41	28	53			2	1	3	1	14.2	14.2	14.2
<b>Raw River Water Entering the Treatment Plants</b>	37			121	1	517			11	1	40	2	29.4	14.2	44.7
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.44	0.10	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.50	0.12	1.00
<b>Water Entering the Plant Reservoir</b>	61	0	0.0				0	0.0				61	0.47	0.10	1.00
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.45	0.10	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.52	0.10	1.00
<b>Treated Water Entering the Distribution System</b>	61	0	0.0				0	0.0				61	0.49	0.10	1.00
<b>February</b>															
Rossdale Raw (MPN/100mL)	29			144	1	816			12	1	44	1	17.0	17.0	17.0
E.L. Smith Raw (MPN/100mL)	4			18	12	28			1	1	2	1	11.8	11.8	11.8
<b>Raw River Water Entering the Treatment Plants</b>	33			129	1	816			10	1	44	2	14.4	11.8	17.0
Rossdale Treated (PA/100mL)	28	0	0.0				0	0.0				28	0.73	0.11	1.00
E.L. Smith Treated (PA/100mL)	29	0	0.0				0	0.0				29	0.64	0.11	1.48
<b>Water Entering the Plant Reservoir</b>	57	0	0.0				0	0.0				57	0.69	0.11	1.48
Rossdale Reservoir (PA/100mL)	28	0	0.0				0	0.0				28	0.74	0.11	1.00
E.L. Smith Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.68	0.11	1.00
<b>Treated Water Entering the Distribution System</b>	57	0	0.0				0	0.0				57	0.71	0.11	1.00

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2024

	Coliforms, total						E. coli					cATP (pg/mL)			
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
<b>March</b>															
Rossdale Raw (MPN/100mL)	32			1,469	1	13,700			87	1	1,760	1	293	293	293
E.L. Smith Raw (MPN/100mL)	4			2,505	8	9,770			16	1	62	1	60.7	60.7	60.7
<b>Raw River Water Entering the Treatment Plants</b>	<b>36</b>			<b>1,584</b>	<b>1</b>	<b>13,700</b>			<b>79</b>	<b>1</b>	<b>1,760</b>	<b>2</b>	<b>177</b>	<b>60.7</b>	<b>293</b>
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.70	0.12	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.77	0.13	1.00
<b>Water Entering the Plant Reservoir</b>	<b>62</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>62</b>	<b>0.74</b>	<b>0.12</b>	<b>1.00</b>
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.71	0.10	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.67	0.11	1.00
<b>Treated Water Entering the Distribution System</b>	<b>62</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>62</b>	<b>0.69</b>	<b>0.10</b>	<b>1.00</b>
<b>April</b>															
Rossdale Raw (MPN/100mL)	31			208	1	1,120			9	1	58	1	92.2	92.2	92.2
E.L. Smith Raw (MPN/100mL)	4			353	91	980			2	1	5	1	126	126	126
<b>Raw River Water Entering the Treatment Plants</b>	<b>35</b>			<b>225</b>	<b>1</b>	<b>1,120</b>			<b>8</b>	<b>1</b>	<b>58</b>	<b>2</b>	<b>109</b>	<b>92.2</b>	<b>126</b>
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.66	0.14	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.57	0.10	1.00
<b>Water Entering the Plant Reservoir</b>	<b>60</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>60</b>	<b>0.61</b>	<b>0.10</b>	<b>1.00</b>
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.58	0.11	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.56	0.10	1.00
<b>Treated Water Entering the Distribution System</b>	<b>60</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>60</b>	<b>0.57</b>	<b>0.10</b>	<b>1.00</b>

2.2.1 Bacteriological Data: Water Treatment Plants

2024

	Coliforms, total					E. coli					cATP (pg/mL)				
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
<b>May</b>															
Rossdale Raw (MPN/100mL)	30			174	1	517			16	1	63	1	121	121	121
E.L. Smith Raw (MPN/100mL)	5			194	43	276			9	2	22	1	99.6	99.6	99.6
<b>Raw River Water Entering the Treatment Plants</b>	35			177	1	517			15	1	63	2	110	99.6	121
Rossdale Treated (PA/100mL)	29	0	0.0				0	0.0				29	0.49	0.10	1.02
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.44	0.11	1.00
<b>Water Entering the Plant Reservoir</b>	60	0	0.0				0	0.0				60	0.46	0.10	1.02
Rossdale Reservoir (PA/100mL)	29	0	0.0				0	0.0				29	0.50	0.10	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.42	0.11	1.00
<b>Treated Water Entering the Distribution System</b>	60	0	0.0				0	0.0				60	0.46	0.10	1.00
<b>June</b>															
Rossdale Raw (MPN/100mL)	31			158	1	1,410			8	1	45	1	77.0	77.0	77.0
E.L. Smith Raw (MPN/100mL)	4			131	48	249			7	2	15	1	66.5	66.5	66.5
<b>Raw River Water Entering the Treatment Plants</b>	35			155	1	1,410			8	1	45	2	71.8	66.5	77.0
Rossdale Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.66	0.14	1.00
E.L. Smith Treated (PA/100mL)	30	0	0.0				0	0.0				30	0.61	0.10	1.00
<b>Water Entering the Plant Reservoir</b>	60	0	0.0				0	0.0				60	0.64	0.10	1.00
Rossdale Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.73	0.12	1.00
E.L. Smith Reservoir (PA/100mL)	30	0	0.0				0	0.0				30	0.71	0.10	1.03
<b>Treated Water Entering the Distribution System</b>	60	0	0.0				0	0.0				60	0.72	0.10	1.03

**2.2.1 Bacteriological Data: Water Treatment Plants**

**2024**

	Coliforms, total					E. coli					cATP (pg/mL)				
	Count	# +ve	% +ve	Mean	Min	Max	# +ve	% +ve	Mean	Min	Max	Count	Mean	Min	Max
<b>July</b>															
Rossdale Raw (MPN/100mL)	31			1,838	179	22,400			51	1	538	1	80.6	80.6	80.6
E.L. Smith Raw (MPN/100mL)	5			912	162	1,990			38	1	115	1	50.6	50.6	50.6
<b>Raw River Water Entering the Treatment Plants</b>	<b>36</b>			<b>1,709</b>	<b>162</b>	<b>22,400</b>			<b>50</b>	<b>1</b>	<b>538</b>	<b>2</b>	<b>65.6</b>	<b>50.6</b>	<b>80.6</b>
Rossdale Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.89	0.12	1.00
E.L. Smith Treated (PA/100mL)	31	0	0.0				0	0.0				31	0.89	0.12	1.00
<b>Water Entering the Plant Reservoir</b>	<b>62</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>62</b>	<b>0.89</b>	<b>0.12</b>	<b>1.00</b>
Rossdale Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.91	0.10	1.00
E.L. Smith Reservoir (PA/100mL)	31	0	0.0				0	0.0				31	0.86	0.11	1.00
<b>Treated Water Entering the Distribution System</b>	<b>62</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>62</b>	<b>0.89</b>	<b>0.10</b>	<b>1.00</b>

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

**2.2.2 Bacteriological Data: Distribution System  
2024**

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)			
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max
<b>January</b>									
Complaint Water	15	0	0.0	0	0.0	15	0.36	0.14	1.50
FIELD DISTRIBUTION	146	0	0.0	0	0.0	55	0.28	0.11	0.86
FIELD DISTRIBUTION - PLPH	55	1	1.8	0	0.0				
FIELD RESERVOIR	63	0	0.0	0	0.0	63	0.36	0.11	1.26
FIELD RESERVOIR - PLPH (duplicate-not counted)	63	0	0.0	0	0.0				
Monthly	224	1	0.4	0	0.0	133	0.33	0.11	1.50
<b>February</b>									
Complaint Water	7	0	0.0	0	0.0	7	0.17	0.12	0.32
FIELD DISTRIBUTION	153	0	0.0	0	0.0	54	0.21	0.10	1.09
FIELD DISTRIBUTION - PLPH	54	0	0.0	0	0.0				
FIELD RESERVOIR	52	0	0.0	0	0.0	52	0.20	0.10	0.51
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	212	0	0.0	0	0.0	113	0.20	0.10	1.09
<b>March</b>									
Complaint Water	13	0	0.0	0	0.0	13	0.18	0.11	0.42
FIELD DISTRIBUTION	146	0	0.0	0	0.0	54	0.28	0.11	0.96
FIELD DISTRIBUTION - PLPH	54	0	0.0	0	0.0				
FIELD RESERVOIR	52	0	0.0	0	0.0	52	0.23	0.10	0.80
FIELD RESERVOIR - PLPH (duplicate-not counted)	52	0	0.0	0	0.0				
Monthly	211	0	0.0	0	0.0	119	0.25	0.10	0.96
<b>April</b>									
Complaint Water	16	0	0.0	0	0.0	16	0.35	0.12	0.75
FIELD DISTRIBUTION	153	1	0.7	0	0.0	55	0.29	0.10	2.48
FIELD DISTRIBUTION - PLPH	54	0	0.0	0	0.0				
FIELD RESERVOIR	65	0	0.0	0	0.0	65	0.35	0.10	1.67
FIELD RESERVOIR - PLPH (duplicate-not counted)	64	0	0.0	0	0.0				
Monthly	234	1	0.4	0	0.0	136	0.33	0.10	2.48

**2.2.2 Bacteriological Data: Distribution System  
2024**

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)			
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max
<b>May</b>									
Complaint Water	11	0	0.0	0	0.0	11	0.27	0.10	0.49
FIELD DISTRIBUTION	144	0	0.0	0	0.0	54	0.43	0.12	1.46
FIELD DISTRIBUTION - PLPH	54	0	0.0	0	0.0				
FIELD RESERVOIR	49	0	0.0	0	0.0	49	0.58	0.10	2.93
FIELD RESERVOIR - PLPH (duplicate-not counted)	49	0	0.0	0	0.0				
Monthly	204	0	0.0	0	0.0	114	0.47	0.10	2.93
<b>June</b>									
Complaint Water	13	0	0.0	0	0.0	13	0.39	0.11	0.91
FIELD DISTRIBUTION	124	0	0.0	0	0.0	58	0.39	0.11	0.93
FIELD DISTRIBUTION - PLPH	54	0	0.0	0	0.0				
FIELD RESERVOIR	52	0	0.0	0	0.0	52	0.49	0.10	3.85
FIELD RESERVOIR - PLPH (duplicate-not counted)	51	0	0.0	0	0.0				
Monthly	189	0	0.0	0	0.0	123	0.43	0.10	3.85
<b>July</b>									
Complaint Water	11	0	0.0	0	0.0	11	0.64	0.24	1.66
FIELD DISTRIBUTION	99	2	2.0	0	0.0	59	0.19	0.11	0.41
FIELD DISTRIBUTION - PLPH	58	0	0.0	0	0.0				
FIELD RESERVOIR	66	0	0.0	0	0.0	66	0.52	0.11	2.40
FIELD RESERVOIR - PLPH (duplicate-not counted)	65	0	0.0	0	0.0				
Monthly	176	2	1.1	0	0.0	136	0.37	0.11	2.40
Year to Date	1,833	4	0.2	0	0.0	874	0.35	0.10	3.85

## **2.2.2 Bacteriological Data: Distribution System 2024**

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  
2024**

	Coliforms, total (PA/100 mL)			E. coli (PA/100 mL)		cATP (pg/mL)						
	Count	# +ve	% +ve	# +ve	% +ve	Count	Mean	Min	Max			
<b>Samples from Complaints</b>												
January	15	0	0.0	0	0.0	15	0.36	0.14	1.50			
February	7	0	0.0	0	0.0	7	0.17	0.12	0.32			
March	13	0	0.0	0	0.0	13	0.18	0.11	0.42			
April	16	0	0.0	0	0.0	16	0.35	0.12	0.75			
May	11	0	0.0	0	0.0	11	0.27	0.10	0.49			
June	13	0	0.0	0	0.0	13	0.39	0.11	0.91			
July	11	0	0.0	0	0.0	11	0.64	0.24	1.66			
	Year to Date			86	0	0.0	0	0.0	86	0.33	0.10	1.66
<b>Samples from Depressurizations</b>												
January	70	0	0.0	0	0.0							
February	48	0	0.0	0	0.0							
March	37	0	0.0	0	0.0							
April	45	0	0.0	0	0.0							
May	44	0	0.0	0	0.0							
June	42	0	0.0	0	0.0							
July	42	0	0.0	0	0.0							
	Year to Date			328	0	0.0	0	0.0				