

**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
<b>January</b>															
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
<b>Raw River Water Entering the Treatment Plants</b>	<b>37</b>	<b>0</b>	<b>0.0</b>	<b>73</b>	<b>1</b>	<b>291</b>	<b>0</b>	<b>0.0</b>	<b>7</b>	<b>1</b>	<b>39</b>	<b>2</b>	<b>15.4</b>	<b>15.2</b>	<b>15.7</b>
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
<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>0.21</b>	<b>0.02</b>	<b>1.00</b>
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
<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>0.30</b>	<b>0.03</b>	<b>1.00</b>
<b>February</b>															
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
<b>Raw River Water Entering the Treatment Plants</b>	<b>35</b>	<b>0</b>	<b>0.0</b>	<b>87</b>	<b>1</b>	<b>387</b>	<b>0</b>	<b>0.0</b>	<b>10</b>	<b>1</b>	<b>58</b>	<b>2</b>	<b>9.61</b>	<b>8.49</b>	<b>10.7</b>
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
<b>Water Entering the Plant Reservoir</b>	<b>56</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>56</b>	<b>0.23</b>	<b>0.03</b>	<b>1.00</b>
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
<b>Treated Water Entering the Distribution System</b>	<b>56</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>56</b>	<b>0.25</b>	<b>0.03</b>	<b>1.00</b>

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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
<b>March</b>															
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
<b>Raw River Water Entering the Treatment Plants</b>	<b>37</b>	<b>0</b>	<b>0.0</b>	<b>337</b>	<b>1</b>	<b>1,990</b>	<b>0</b>	<b>0.0</b>	<b>28</b>	<b>1</b>	<b>96</b>	<b>2</b>	<b>31.3</b>	<b>30.0</b>	<b>32.6</b>
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
<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>0.44</b>	<b>0.03</b>	<b>1.00</b>
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
<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>0.45</b>	<b>0.03</b>	<b>1.00</b>
<b>April</b>															
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
<b>Raw River Water Entering the Treatment Plants</b>	<b>35</b>	<b>0</b>	<b>0.0</b>	<b>70</b>	<b>1</b>	<b>921</b>	<b>0</b>	<b>0.0</b>	<b>8</b>	<b>1</b>	<b>105</b>	<b>2</b>	<b>311</b>	<b>311</b>	<b>311</b>
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
<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>0.41</b>	<b>0.02</b>	<b>1.00</b>
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
<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>0.46</b>	<b>0.03</b>	<b>1.00</b>

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2021**

	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)	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
<b>Raw River Water Entering the Treatment Plants</b>	<b>35</b>	<b>0</b>	<b>0.0</b>	<b>477</b>	<b>1</b>	<b>3,230</b>	<b>0</b>	<b>0.0</b>	<b>62</b>	<b>1</b>	<b>980</b>	<b>2</b>	<b>145</b>	<b>114</b>	<b>176</b>
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
<b>Water Entering the Plant Reservoir</b>	<b>61</b>	<b>0</b>	<b>0.0</b>				<b>0</b>	<b>0.0</b>				<b>61</b>	<b>0.45</b>	<b>0.02</b>	<b>1.00</b>
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
<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>0.51</b>	<b>0.02</b>	<b>1.00</b>
<b>June</b>															
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
<b>Raw River Water Entering the Treatment Plants</b>	<b>37</b>	<b>0</b>	<b>0.0</b>	<b>504</b>	<b>1</b>	<b>1,730</b>	<b>0</b>	<b>0.0</b>	<b>28</b>	<b>1</b>	<b>105</b>	<b>2</b>	<b>265</b>	<b>261</b>	<b>268</b>
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
<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>0.54</b>	<b>0.02</b>	<b>1.00</b>
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
<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>0.51</b>	<b>0.02</b>	<b>1.00</b>

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

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

	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>									
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
<b>February</b>									
Complaint Water	1	0	0.0	0	0.0	1	0.12	0.12	0.12
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	229	0	0.0	0	0.0	119	0.20	0.03	5.38
<b>March</b>									
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
<b>April</b>									
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

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June 2021**

	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>									
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
<b>June</b>									
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
Year to Date	1,356	0	0.0	0	0.0	734	0.15	0.01	5.38

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.

EPCOR's operations program specifies a minimum of 190 samples to be collected and analyzed in each month for random bacteriological monitoring purposes. Due to the closure of many public places, buildings and facilities because of COVID-19, and to protect the health of our employees, we were able to collect only 177 samples as part of the random program in April. An additional 58 samples were collected as part of system depressurizations and complaint monitoring. AEP was notified of the variance from the operations program (EDGE # 366491).

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

	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	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
Year to Date	40	0	0.0	0	0.0	40	0.21	0.02	2.44
<b>Samples from Depressurizations</b>									
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				
Year to Date	391	0	0.0	0	0.0				