EDMONTON WATERWORKS
MONTHLY REPORT

April 2024

PROVIDING MORE EPCOR

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1.1.1 Operations – Rossdale and E.L. Smith Plants

Plant Bypasses

The number of bypasses shown on Table 1.2.26 “Rossdale Waste Stream Data” and Table 1.2.27 “E.L. Smith Waste Stream Data” include both planned and unplanned bypasses. A planned bypass is any bypass that is planned a minimum of one day ahead of the actual bypass. All other bypasses are considered unplanned.

In April, Rossdale Plant had one unplanned bypass and no planned shutdowns.

Date	Type	Bypass Description
Apr 19	Unplanned	3.5 hours shutdown due to power outage at Rossdale substation

In April, E.L. Smith Plant had one planned shutdown and no bypasses.

Date	Type	Bypass Description
Apr 24	Planned	14 hours shutdown for capital work and maintenance

Clarifier Blowdown Volume

- The clarifier blowdown volume shown on Table 1.2.26 and Table 1.2.27 include estimated plant leakage.

Dechlorination Highlights

- During the month of April, there were zero instances exceeding 15 minutes of chlorinated waste released at the outfall structure at Rossdale Water Treatment Plant. On April 8 and April 19, sudden increases in flow to the waste stream resulted in short periods of detectable levels of chlorine, approximately 7 minutes and 12 minutes in duration, while the sodium bisulphite dose was increased to compensate.
- During the month of April, there were zero instances of chlorinated waste released at the outfall structure at E.L. Smith Water Treatment Plant.

Chemical Dosing Highlights

In April, Rossdale and E.L. Smith Water Treatment Plants did not exceed the Maximum Use in the Standard 60, published by the National Sanitation Foundation and the American National Sanitation Standards Institute (NSF/ANSI) for Alum or Caustic Soda.

Chemicals Used for the Month

CHEMICAL NAME	MANUFACTURER
Aluminum Sulfate 48.5%	Chemtrade
Aqua Ammonia 19%	Univar
Caustic Soda 50%	Chemtrade
Hydrofluorosilicic Acid 25%	Nutrien
Magnafloc LT27AG / Praestol DW27AG	Solenis
Magnafloc LT-7995	Solenis
Phosphoric Acid 75%	Innophos
Sodium Hypochlorite 12%	Univar
Liquid Ammonium Sulphate 41%	Umicore Canada Inc
Salt	Windsor
Sodium Bisulphite 38%	Chemtrade

ENV-1.1.2 EDMONTON INCIDENT REPORT SUMMARY – April 2024

EPCOR Incident Number	Description	Date of Incident	AEPA Reference Number
ENV-20240412-009225-v1	About 45 m^3 of potable chlorinated water at +/-1.5ppm was released to the surface due to a suspected leak within the water distribution system buried underground. The water drained to the nearby storm catch basin. Dechlorination pucks were placed in the path of water and the water entry point into the drainage infrastructure to dechlorinate the water. The leak was isolated until the repair was completed.	April 12, 2024	426797
ENV-20240418-274915	On April 5, 2024, following a failed sample (total coliform positive) on Hydrant 16943, an EPCOR emergency response member was dispatched to site to collect four (4) resamples. The results showed 3 out of the 4 resamples passed. H16943 (Right cap) had a 2nd total coliform positive (TC+) Following the 2nd failed sample a super chlorination of the hydrant (H16943) occurred on April 18th and four (4) resamples were collected by EPCOR after 3 hours of the hydrant being super chlorinated. Again the results showed 3 out of the 4 resamples passed. H16943 (Right Cap) again had a 3rd TC+. Following the 3rd failed sample an EPCOR field crew replaced the hydrant body (H16943) on April 20th and four (4) resamples were collected by EPCOR. After samples were collected the hydrant control valve was closed as a precautionary measure. The lab reported all resamples passed.	April 18, 2024	426963 & 427119

ENV-20240424-744751	At 15:11Hrs, EPCOR was conducting routine maintenance at the Kaskitayo water truck fill station located at 1851 - 111 Street NW when personnel observed a hydrocarbon sheen at the site leading to a storm CB. The sheen is suspected to have originated from a third party vehicle using the truck fill station. EPCOR sampled the impacted CB for the six approval parameters and hydrocarbons. This CB discharges approximately 260 meters downstream into Blackmud Creek at Outfall 274 (OF274) located 30 meters west of the 111 Street bridge. There was no visual indication of hydrocarbons at the outfall or in Blackmud Creek. This release was reported to the regulator on April 24, 2024. Steps taken to minimize, control or stop the release: • EPCOR confirmed that a trace amount (<500 ml) of suspected diesel fuel had entered the CB and was contained at the first downstream manhole. Absorbent booms were placed inside the catch basin, the downstream manhole and as a precaution at the outfall to collect any trace hydrocarbons present. Absorbent pads were placed in the catch basin to remove residual hydrocarbons from the release and cleanup of the impacted surface was completed. Steps that will be taken to prevent similar releases: • EPCOR actively responds to reports of releases to the storm and sanitary collection systems working to minimize impact to the environment, customer and the collection systems. Further investigation is underway to determine if the responsible party can be identified for the release of the hydrocarbon at the Kaskitayo water truck fill station, but at this time the third party generator is not known.	April 24, 2024	424272

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

ROSSDALE WATER TREATMENT PLANT (LEVEL IV)	
Director, Edmonton Water Treatment Plants	
Senior Manager, Operations	**WT II**
Manager, Operations	**WT III, WWT III**
Title	Alberta Environment Certification Level
Operations Engineer	WT I
Manager, Transmission Operations	WT III
Operations Foreman	WT IV
HEI Foreman	WT IV
Operations Foreman	WT IV
Operations Foreman	WT IV
Operations Foreman	WT IV
Operations Foreman	WT IV
Transmission Foreman	WT III
Training Operator Foreman	WT III
Lead Hand, Operator	WT II
Operator I	WT III
Operator I	WT II
Lead Hand, Operator	WT II
Operator I	WT III
Operator I	WT III
Operations Trainer	WT III
Day Foreman	WT IV
Lead Hand, Operator	WT II
Lead Hand, Operator	WT III
Operator I	WT II
Operator I	WT II
Operator I	WT III
Lead Hand, Operator	WT II
Operator I	WT III, WD II
Operator I	WT III, WWT III
Operator I	WT I
Operator I	WT II, WD II, WWT II, WWC II
Operator I (temp)	WT I, WC I
Operator I (temp)	WT II, WD II, WWT I, WWC II

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

E.L. SMITH TREATMENT PLANT (LEVEL IV)	
Director, Edmonton Water Treatment Plants	
Senior Manager, Operations	**WT II**
Manager, Operations	**WT III, WWT III**
Title	Alberta Environment Certification Level
Operations Engineer	
Operations Engineer	WWC I
Day Foreman	WT IV
HEI Foreman	WT IV
Training Operator Foreman	WT IV
Operations Foreman	WT IV
Operations Foreman	WT IV
Operations Foreman	WT III
Operations Foreman	WT IV
Operations Foreman	WT IV
Lead Hand, Operator	WT III
Lead Hand, Operator	WT II
Lead Hand, Operator	WT III
Lead Hand, Operator	WT III
Lead Hand, Operator	WT II, WD II, WWT I, WWC I
Operator I	WT III, WWT II,
Operator I	WT II
Operator I	WT III, WWT III
Operator I	WT II
Operator I	WT II, WD I, WWT II, WWC I
Operator I	WT II, WD I
Operator I	WT III, WD I, WWT II, WWC I

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

DISTRIBUTION SYSTEM (LEVEL IV FACILITY)

WATER DISTRIBUTION (WD) - NETWORK MAINTENANCE

Senior Manager, Maintenance and Construction

Manager, Distribution Maintenance

Manager, Dist. Maint Schedule

Title	Alberta Environment Certification Level
Water Network Operator	WD IV WWC I
Water Network Operator	WD IV
Foreman III	WD III
Foreman III	WD III
Foreman III	WD III
Foreman III	WD III
Foreman I	WD III WWC I
Foreman I	WD II
Foreman I	WD III
Foreman I	WD II
Foreman I	WD II
Foreman I	WD II
Foreman I	WD II
Foreman I	WD II
Foreman I	WD II
Foreman I	WD III
Foreman I	WD II
Foreman I	WD II
Foreman I	WD II
Equipment Operator III	WD II
Equipment Operator III	WD I
Equipment Operator III	WD II
Equipment Operator III	WD I
Equipment Operator III	WD II
Equipment Operator III	WD I
Equipment Operator III	WD I
Equipment Operator III	WD II
Equipment Operator III	WD II
Equipment Operator III	WD II
Equipment Operator III	WD II
Equipment Operator III	WD II
Equipment Operator III	WD I
Equipment Operator III	WD II
Equipment Operator III	WD II
Labourer II	WD I
Labourer II	WD I
Labourer II	WD I
Labourer II	WD I
Labourer III	WD II
Labourer III	WD III
Labourer II	WD I

Labourer III	WD I
Labourer II	WD I
Labourer II	WD I

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

DISTRIBUTION SYSTEM (LEVEL IV FACILITY)
WATER DISTRIBUTION (WD) - NETWORK MAINTENANCE

Senior Manager, Maintenance and Construction
Manager, Maintenance and Construction
Manager, Dist. Maint Scheduling

Title	Alberta Environment Certification Level
Truck Driver III	WD I
Labourer II	WD I
Labourer II	WD I
Labourer II	WD I
Labourer II	WD II
Labourer II	WD II
Labourer II	WD II
Truck Driver III	WD II
Truck Driver III	WD I
Truck Driver III	WD I
Foreman III	WD III
Welder	WD II
Maintenance Repairman I	WD II
Maintenance Repairman I	WD I
Maintenance Repairman I	WD I
Labourer III	WD I
Labourer II	WD I
Foreman I	WD I
Water Sys Tech Support Specialist	WD II
Water Sys Tech Support Specialist	WD IV

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

DISTRIBUTION SYSTEM (LEVEL IV FACILITY)

WATER DISTRIBUTION (WD) - FIELD OPERATIONS

Senior Manager, Distribution Operations	
Manager, Field Operations	
Manager, Metering and Preventative Maintenance	**WD I**
Manager, Water Trouble	**WD III**
Title	Alberta Environment Certification Level
Foreman III	WD IV
Foreman III	WD IV
Foreman I	WD II
Foreman I	WD II
Labourer III	WD II
Labourer III	WD II
Labourer III	WD I
Foreman I	WD I
Labourer III	WD III
Labourer II	WD I
Labourer II	WD II
Labourer II	WD I
Labourer III	WD I
Labourer III	WD I
Labourer II	WD II
Labourer II	WD I
Labourer III	WD I
Labourer II	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD III
Water Systems Serviceman	WD II
Water Systems Serviceman	WD III
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II
Water Systems Serviceman	WD II

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

DISTRIBUTION SYSTEM (LEVEL IV FACILITY)

WATER DISTRIBUTION (WD) - CUSTOMER SERVICE

Senior Manager, Customer Service

Manager, Dispatch

Manager, Inspections and Customer Service

Title	Alberta Environment Certification Level
Team Lead, Dispatch	
Dispatcher Coordinator	WD I
Inspector – Water Metering	WD II
Inspector – Water Metering	WD I
Foreman III	WD III
Manager, Cross Connections	WD II
Inspector – Cross Connections	WD I

1.1.3 Alberta Environment Operator Certifications

Operator Contact Number: EPCOR Water Services Dispatch (24 hr) (780) 412-4500

DISTRIBUTION SYSTEM (LEVEL IV FACILITY)

WATER METERING (WD)

Manager, Metering Operations	**WD I**
Title	Alberta Environment Certification Level
Foreman III	WD II
Meter Mechanic II	WD II
Meter Installer II	WD III
Meter Installer I	WD I
Meter Installer I	WD II
Meter Installer I	WD II
Meter Installer I	WD I
Meter Installer I	WD III
Meter Installer II	WD I

1.2.1 Raw Water Intake (ML)

April 2024

Day	Rossdale			E.L. Smith	Plants Combined Total
	Plant 1	Plant 2	Plant Total	Plant Total	
1	60	100	160	251	411
2	60	112	172	257	429
3	60	120	180	263	443
4	60	105	165	271	437
5	60	106	166	261	427
6	60	104	164	250	414
7	60	100	160	248	408
8	60	100	160	261	421
9	60	100	160	259	419
10	60	100	160	251	411
11	60	113	173	256	429
12	60	120	180	272	452
13	60	106	166	262	428
14	60	100	160	261	421
15	60	100	160	261	421
16	60	100	160	260	420
17	57	113	170	260	430
18	55	117	172	261	433
19	52	100	152	265	416
20	55	125	180	277	457
21	55	125	180	280	460
22	55	125	180	281	461
23	55	125	180	281	461
24	55	125	180	141	321
25	55	125	180	284	464
26	55	125	180	300	480
27	55	125	180	293	473
28	55	125	180	282	462
29	69	125	194	294	488
30	62	119	180	281	462
Monthly Total	1,749	3,385	5,134	7,925	13,059
Monthly Min	52	100	152	141	
Monthly Max	69	125	194	300	
Monthly Avg	58	113	171	264	435

NOTES: ' -- ' indicates plant offline

1.2.2 Treated Water Production (ML)

April 2024

Day	Rossdale (Plant 1 & Plant 2)			E.L. Smith			Plants Combined	Reservoir Levels (%)
	Flow Meters			Flow Meters			Flow Meters (Both Plants)	
	Min	Max	Total	Min	Max	Total		
1	87	207	142	201	214	211	353	74.1
2	51	205	149	199	287	217	365	68.4
3	69	210	162	201	299	223	384	70.8
4	88	208	143	199	281	233	377	74.9
5	79	206	148	202	284	219	366	73.0
6	69	206	147	200	271	211	358	76.9
7	62	208	139	197	212	203	342	77.0
8	64	209	139	203	215	218	357	73.0
9	61	209	142	200	214	215	357	68.7
10	66	207	142	202	214	210	352	68.5
11	70	212	155	199	286	217	372	65.8
12	148	209	161	200	285	231	392	67.3
13	76	199	148	201	270	219	367	73.7
14	65	206	143	202	280	219	362	73.5
15	65	208	141	202	263	218	359	69.8
16	55	207	142	200	279	221	363	68.3
17	0.0	206	152	200	275	214	366	68.1
18	79	209	154	200	276	216	371	68.9
19	0.0	208	122	200	292	212	334	69.8
20	75	208	169	202	294	226	395	66.9
21	76	206	167	198	297	233	400	71.5
22	75	203	166	199	290	231	397	75.7
23	88	209	166	187	300	236	403	77.9
24	131	209	168	0.0	292	93	261	79.1
25	79	200	166	0.0	318	224	390	59.4
26	79	209	167	196	295	246	412	61.2
27	96	208	169	204	277	240	409	67.8
28	88	208	165	201	274	229	394	73.8
29	133	209	183	201	298	236	418	74.8
30	101	207	155	200	290	228	384	84.2
Monthly Tota			4,610			6,550	11,160	
Monthly Min	0.0			0.0				
Monthly Max		212			318			
Monthly Avg			154			218	372	

NOTES: ' -- ' indicates plant offline

- Estimated flows are based on UV effluent flow meters to address inaccuracy of highlift flow meters.
- Reservoir levels (%) recorded daily at 7 AM

1.2.3 Raw Water Quality - North Saskatchewan River

April 2024

Day	Rossdale										E.L. Smith									
	Turbidity (NTU)			pH			Colour (TCU)				Turbidity (NTU)			pH			Colour (TCU)			
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	
1	2.2	3.5	2.7	8.1	8.1	8.1	6.8	8.0	7.7		2.6	4.5	3.5	8.0	8.1	8.1	7.0	7.9	7.3	
2	3.2	3.8	3.5	8.1	8.1	8.1	6.4	7.0	6.8		2.3	4.6	3.4	8.1	8.1	8.1	6.3	7.3	6.8	
3	3.5	4.6	4.0	8.1	8.1	8.1	6.4	7.0	6.6		2.6	7.2	4.0	8.1	8.1	8.1	6.5	7.9	7.0	
4	3.7	5.8	4.5	8.1	8.1	8.1	6.5	7.9	7.1		4.5	7.1	5.0	8.1	8.1	8.1	7.9	8.5	8.1	
5	3.7	7.3	4.2	8.1	8.1	8.1	7.7	10.5	8.5		3.2	4.8	3.6	8.1	8.1	8.1	8.4	10.8	9.9	
6	4.2	7.1	5.6	8.0	8.1	8.0	10.3	12.0	10.8		4.2	18	9.3	8.0	8.1	8.1	10.8	13.3	11.7	
7	6.6	22	9.6	8.0	8.0	8.0	12.0	14.2	13.0		8.1	24	15	8.0	8.0	8.0	12.5	14.1	13.5	
8	11	22	14	8.0	8.0	8.0	11.2	13.4	12.2		10	20	13	8.0	8.1	8.1	11.7	12.5	12.1	
9	8.1	13	9.4	8.0	8.1	8.0	10.5	12.0	11.3		8.9	12	10	8.1	8.1	8.1	10.4	12.0	10.9	
10	7.5	14	10	8.0	8.1	8.0	7.9	10.5	9.8		7.2	39	14	8.1	8.1	8.1	9.2	10.4	9.5	
11	8.9	12	11	8.0	8.0	8.0	7.9	9.0	8.3		6.0	18	11	8.1	8.1	8.1	8.8	9.2	9.0	
12	9.4	39	16	8.0	8.1	8.0	7.9	8.6	8.2		5.4	50	17	8.1	8.1	8.1	9.0	9.6	9.3	
13	15	34	22	8.0	8.1	8.0	8.3	9.0	8.6		8.0	31	17	8.1	8.1	8.1	8.2	10.7	9.0	
14	16	25	19	8.0	8.1	8.1	8.1	8.7	8.3		11	25	16	8.0	8.1	8.1	7.6	9.2	8.2	
15	18	24	21	8.1	8.1	8.1	6.6	8.7	7.1		17	28	21	8.0	8.1	8.0	7.1	8.1	7.5	
16	18	50	29	8.0	8.1	8.0	7.0	8.2	7.2		19	40	26	8.1	8.1	8.1	6.4	7.8	7.0	
17	21	27	23	8.0	8.1	8.1	7.0	8.1	7.4		21	27	23	8.0	8.1	8.1	6.4	7.4	6.8	
18	16	28	24	8.0	8.3	8.2	6.9	8.1	7.0		15	25	18	8.0	8.1	8.0	6.3	7.9	7.1	
19	15	22	21	8.1	8.2	8.1	5.7	7.1	6.5		12	19	15	8.1	8.1	8.1	6.3	7.8	7.0	
20	13	22	18	8.1	8.1	8.1	6.5	7.6	7.0		12	21	16	8.1	8.1	8.1	6.7	7.8	7.0	
21	13	36	21	8.1	8.1	8.1	6.7	6.8	6.8		18	36	26	8.1	8.1	8.1	6.6	7.8	7.0	
22	30	85	45	8.1	8.1	8.1	5.7	7.0	6.5		26	100	45	8.1	8.2	8.2	6.3	7.6	6.7	
23	50	110	65	8.1	8.1	8.1	5.7	6.6	5.9		7.8	170	55	7.9	8.1	8.0	5.5	7.0	6.3	
24	50	400	180	8.0	8.2	8.1	5.6	7.9	6.5		80	290	140	8.1	8.1	8.1	5.5	6.5	6.4	
25	50	110	80	8.1	8.2	8.1	5.5	6.2	5.8		35	80	55	8.1	8.2	8.2	5.6	6.7	6.2	
26	32	65	50	8.2	8.2	8.2	4.9	5.5	5.3		33	65	50	8.1	8.3	8.2	5.0	5.9	5.5	
27	17	45	35	8.2	8.2	8.2	4.1	6.0	5.4		20	45	27	8.1	8.2	8.2	5.5	6.8	6.2	
28	9.0	17	15	8.2	8.3	8.2	4.5	6.0	5.6		11	22	16	8.2	8.3	8.3	5.0	6.7	6.0	
29	8.5	17	11	8.2	8.3	8.2	4.5	5.8	5.1		11	13	12	8.3	8.3	8.3	5.0	6.0	5.7	
30	8.5	20	13	8.3	8.3	8.3	5.3	7.8	6.3		9.1	12	10	8.3	8.3	8.3	5.8	6.4	6.2	
Monthly Min/Max/Avg	2.2	400	26	8.0	8.3	8.1	4.1	14.2	7.6		2.3	290	23	7.9	8.3	8.1	5.0	14.1	7.9	

NOTES: ' -- ' indicates plant offline

1.2.4 Treated Water Quality Entering the Distribution System

April 2024

Day	Rossdale														E.L. Smith											
	Turbidity (NTU)			Chloramine Residual (mg/L)			pH			Fluoride Residual (mg/L)			Total Hardness (mg/L as $CaCO_3$)	Colour (TCU)	Turbidity (NTU)			Chloramine Residual (mg/L)			pH			Fluoride Residual (mg/L)			Total Hardness (mg/L as $CaCO_3$)	Colour (TCU)
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Total	Avg
1	0.02	0.04	0.03	1.96	2.11	2.04	7.8	7.8	7.8	0.68	0.71	0.69	174	0.5	0.05	0.05	0.05	1.93	1.98	1.96	7.7	7.7	7.7	0.73	0.74	0.73	170	0.6
2	0.03	0.04	0.03	2.01	2.21	2.13	7.8	7.9	7.9	0.71	0.72	0.71	169	0.4	0.05	0.05	0.05	1.96	2.03	2.00	7.7	7.8	7.7	0.73	0.74	0.73	167	0.5
3	0.03	0.04	0.03	2.01	2.21	2.13	7.8	7.8	7.8	0.69	0.71	0.70	166	0.4	0.05	0.05	0.05	1.99	2.05	2.02	7.7	7.8	7.8	0.73	0.73	0.73	163	0.5
4	0.03	0.05	0.04	1.96	2.11	2.07	7.8	7.8	7.8	0.68	0.69	0.69	159	0.4	0.05	0.05	0.05	1.89	1.98	1.94	7.6	7.8	7.7	0.72	0.73	0.73	162	0.6
5	0.04	0.05	0.05	1.86	2.32	2.18	7.8	7.8	7.8	0.68	0.70	0.68	159	0.4	0.05	0.05	0.05	1.93	2.02	1.95	7.7	7.6	7.6	0.71	0.73	0.72	163	0.8
6	0.04	0.07	0.05	1.81	2.21	2.04	7.7	7.8	7.8	0.68	0.70	0.69	159	0.5	0.05	0.06	0.05	1.93	1.98	1.94	7.6	7.6	7.6	0.71	0.72	0.72	157	0.6
7	0.04	0.06	0.05	2.06	2.21	2.17	7.7	7.8	7.8	0.70	0.72	0.71	158	0.7	0.05	0.06	0.05	1.93	2.02	1.96	7.6	7.7	7.7	0.71	0.73	0.72	158	0.5
8	0.04	0.07	0.05	2.01	2.21	2.10	7.7	7.8	7.8	0.66	0.71	0.68	157	0.9	0.05	0.07	0.05	1.99	2.03	2.02	7.7	7.8	7.7	0.72	0.73	0.73	159	0.6
9	0.04	0.06	0.05	1.81	2.06	1.96	7.7	7.9	7.8	0.65	0.69	0.67	165	0.8	0.05	0.06	0.05	2.01	2.03	2.02	7.7	7.8	7.7	0.73	0.73	0.73	166	0.8
10	0.03	0.06	0.04	1.96	2.11	2.04	7.9	7.9	7.9	0.69	0.72	0.70	160	0.7	0.05	0.05	0.05	1.98	2.05	2.02	7.7	7.7	7.7	0.73	0.74	0.73	157	0.7
11	0.03	0.04	0.03	1.96	2.11	2.04	7.9	7.9	7.9	0.69	0.73	0.70	153	0.3	0.05	0.05	0.05	1.98	2.03	2.01	7.7	7.7	7.7	0.73	0.74	0.74	153	0.8
12	0.03	0.05	0.03	2.01	2.26	2.11	7.9	7.9	7.9	0.67	0.70	0.69	151	0.5	0.05	0.05	0.05	1.99	2.03	2.01	7.7	7.8	7.7	0.74	0.75	0.74	148	0.8
13	0.03	0.05	0.03	1.75	2.32	2.09	7.8	7.9	7.8	0.66	0.69	0.67	154	0.6	0.05	0.05	0.05	1.97	2.02	1.98	7.7	7.8	7.8	0.73	0.75	0.74	154	1.0
14	0.03	0.04	0.03	2.01	2.26	2.10	7.8	7.8	7.8	0.66	0.68	0.67	149	0.6	0.05	0.05	0.05	1.93	1.99	1.97	7.8	7.8	7.8	0.74	0.76	0.75	149	0.9
15	0.03	0.04	0.03	1.86	2.11	2.01	7.8	7.8	7.8	0.66	0.68	0.67	153	0.8	0.05	0.06	0.06	1.98	2.01	1.99	7.8	7.8	7.8	0.75	0.76	0.76	145	1.1
16	0.03	0.05	0.04	1.96	2.21	2.12	7.8	7.9	7.8	0.68	0.69	0.69	150	0.5	0.05	0.06	0.06	1.98	2.02	1.99	7.8	7.8	7.8	0.74	0.75	0.75	150	0.9
17	0.03	0.05	0.03	1.96	2.16	2.09	7.8	7.9	7.9	0.67	0.68	0.68	153	0.7	0.06	0.06	0.06	1.93	1.98	1.95	7.8	7.8	7.8	0.73	0.77	0.75	151	0.9
18	0.03	0.05	0.03	1.86	2.11	1.97	7.8	7.9	7.8	0.68	0.68	0.68	150	0.6	0.06	0.06	0.06	1.93	1.98	1.96	7.8	7.8	7.8	0.77	0.78	0.78	152	0.6
19	0.03	0.04	0.03	1.75	2.16	2.03	7.8	7.9	7.9	0.68	0.69	0.68	154	0.6	0.06	0.06	0.06	1.98	2.08	2.01	7.8	7.8	7.8	0.76	0.78	0.77	155	0.7
20	0.03	0.05	0.04	1.96	2.21	2.12	7.8	7.9	7.9	0.67	0.69	0.68	157	0.7	0.05	0.06	0.06	1.93	1.98	1.97	7.8	7.8	7.8	0.76	0.78	0.77	159	1.0
21	0.03	0.04	0.04	1.96	2.11	2.07	7.9	8.0	7.9	0.67	0.68	0.68	162	0.8	0.05	0.06	0.05	1.95	1.99	1.98	7.8	7.8	7.8	0.76	0.77	0.76	162	0.8
22	0.03	0.04	0.03	1.96	2.16	2.09	7.8	8.0	7.9	0.67	0.68	0.67	165	0.6	0.05	0.06	0.05	1.95	1.98	1.97	7.8	7.8	7.8	0.75	0.76	0.76	162	0.8
23	0.03	0.04	0.03	1.91	2.16	2.03	7.7	7.9	7.8	0.65	0.68	0.67	162	0.8	0.05	0.06	0.05	1.97	2.04	1.99	7.8	7.8	7.8	0.75	0.76	0.76	161	0.8
24	0.03	0.04	0.03	1.96	2.16	2.08	7.7	7.9	7.8	0.63	0.69	0.66	159	0.5	0.05	0.06	0.06	2.03	2.12	2.08	7.7	8.0	7.8	0.64	0.74	0.69	158	0.8
25	0.03	0.04	0.03	1.86	2.21	2.05	7.7	7.9	7.8	0.63	0.70	0.65	164	0.4	0.05	0.05	0.05	1.98	2.09	2.04	7.8	7.9	7.9	0.75	0.77	0.76	164	0.7
26	0.03	0.04	0.04	1.86	2.26	2.09	7.8	7.9	7.9	0.70	0.73	0.72	165	0.4	0.05	0.06	0.06	1.97	2.01	1.98	7.9	7.9	7.9	0.77	0.78	0.78	165	0.5
27	0.03	0.05	0.04	1.91	2.21	2.05	7.8	7.8	7.8	0.71	0.72	0.72	171	0.5	0.06	0.06	0.06	1.94	2.01	1.98	7.8	7.9	7.9	0.77	0.78	0.78	170	0.8
28	0.03	0.05	0.04	1.86	2.06	1.98	7.8	7.8	7.8	0.71	0.72	0.72	176	0.5	0.06	0.06	0.06	1.95	2.03	1.99	7.9	7.9	7.9	0.78	0.80	0.79	174	1.0
29	0.03	0.07	0.04	1.81	2.01	1.93	7.8	7.9	7.8	0.69	0.72	0.71	176	0.7	0.06	0.07	0.06	1.88	2.00	1.95	7.9	7.9	7.9	0.78	0.80	0.79	172	0.9
30	0.02	0.04	0.03	1.86	2.06	1.99	7.8	7.9	7.9	0.69	0.70	0.69	170	0.7	0.06	0.07	0.06	1.88	1.92	1.89	7.9	7.9	7.9	0.78	0.79	0.78	170	0.6
Monthly Min/Max/ Avg	0.02	0.07	0.04	1.75	2.32	2.06	7.7	8.0	7.8	0.63	0.73	0.69	161	0.6	0.05	0.07	0.05	1.88	2.12	1.98	7.6	8.0	7.8	0.64	0.80	0.75	160	0.7

NOTES: ' -- ' indicates plant offline

1.2.4 – 1 ROSSDALE: Treated Water Quality Entering the Distribution System

Date	Temperature (°C)			pH			Hourly Flow (ML per day)		
	Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.
1-Apr	0.5	0.5	0.5	7.8	7.8	7.8	140	155	148
2-Apr	0.6	0.6	0.6	7.8	7.9	7.9	118	146	130
3-Apr	0.5	0.5	0.5	7.8	7.8	7.8	154	175	166
4-Apr	0.5	0.5	0.5	7.8	7.8	7.8	134	157	146
5-Apr	0.5	0.5	0.5	7.8	7.8	7.8	138	156	149
6-Apr	0.5	0.5	0.5	7.7	7.8	7.8	129	152	142
7-Apr	0.5	0.5	0.5	7.7	7.8	7.8	125	156	142
8-Apr	0.5	0.5	0.5	7.7	7.8	7.8	131	157	143
9-Apr	0.5	0.5	0.5	7.7	7.9	7.8	133	153	143
10-Apr	0.5	0.5	0.5	7.9	7.9	7.9	137	160	148
11-Apr	0.5	0.5	0.5	7.9	7.9	7.9	128	150	141
12-Apr	0.6	0.6	0.6	7.9	7.9	7.9	172	194	186
13-Apr	0.6	0.6	0.6	7.8	7.9	7.8	127	147	137
14-Apr	0.9	0.9	0.9	7.8	7.8	7.8	134	156	146
15-Apr	1.1	1.2	1.1	7.8	7.8	7.8	122	141	133
16-Apr	1.0	1.1	1.1	7.8	7.9	7.8	131	158	146
17-Apr	0.8	0.8	0.8	7.8	7.9	7.9	132	161	150
18-Apr	1.1	1.2	1.2	7.8	7.9	7.8	147	164	159
19-Apr	1.1	1.1	1.1	7.8	7.9	7.9	115	139	129
20-Apr	1.4	1.5	1.4	7.8	7.9	7.9	155	172	165
21-Apr	1.6	1.7	1.7	7.9	8.0	7.9	152	177	169
22-Apr	1.5	1.5	1.5	7.8	8.0	7.9	152	175	165
23-Apr	2.3	2.4	2.4	7.7	7.9	7.8	150	170	160
24-Apr	1.8	1.9	1.9	7.7	7.9	7.8	172	196	186
25-Apr	2.4	2.5	2.4	7.7	7.9	7.8	140	172	155
26-Apr	5.0	5.1	5.1	7.8	7.9	7.9	151	169	163
27-Apr	6.1	6.1	6.1	7.8	7.8	7.8	161	176	170
28-Apr	6.9	7.0	6.9	7.8	7.8	7.8	153	172	164
29-Apr	8.6	8.7	8.7	7.8	7.9	7.8	174	194	184
30-Apr	9.4	9.4	9.4	7.8	7.9	7.9	153	175	165
Monthly Min/Max/Avg.	0.5	9.4	2.0	7.7	8.0	7.8	115	196	154

1.2.4 – 2 E. L. Smith: Treated Water Quality Entering the Distribution System

Date	Temperature (°C)			pH			Hourly Flow (ML per day)		
	Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.
1-Apr	0.6	0.6	0.6	7.7	7.7	7.7	206	210	208
2-Apr	0.6	0.6	0.6	7.7	7.8	7.7	214	224	220
3-Apr	0.6	0.6	0.6	7.7	7.8	7.8	222	236	230
4-Apr	0.6	0.6	0.6	7.6	7.8	7.7	213	224	220
5-Apr	0.6	0.6	0.6	7.7	7.6	7.6	218	228	224
6-Apr	0.6	0.6	0.6	7.6	7.6	7.6	219	228	222
7-Apr	0.6	0.6	0.6	7.6	7.7	7.7	205	209	207
8-Apr	0.6	0.6	0.6	7.7	7.8	7.7	206	210	208
9-Apr	0.6	0.6	0.6	7.7	7.8	7.7	206	210	208
10-Apr	0.6	0.6	0.6	7.7	7.7	7.7	206	210	208
11-Apr	0.6	0.6	0.6	7.7	7.7	7.7	214	225	218
12-Apr	0.6	0.6	0.6	7.7	7.8	7.7	224	241	232
13-Apr	0.7	0.7	0.7	7.7	7.8	7.8	219	226	222
14-Apr	0.8	0.8	0.8	7.8	7.8	7.8	214	226	223
15-Apr	0.8	0.8	0.8	7.8	7.8	7.8	209	216	213
16-Apr	0.8	0.8	0.8	7.8	7.8	7.8	215	229	221
17-Apr	0.8	0.8	0.8	7.8	7.8	7.8	215	222	219
18-Apr	0.9	0.9	0.9	7.8	7.8	7.8	208	219	215
19-Apr	0.9	1.0	0.9	7.8	7.8	7.8	206	211	209
20-Apr	1.1	1.1	1.1	7.8	7.8	7.8	218	229	226
21-Apr	1.1	1.2	1.2	7.8	7.8	7.8	221	235	230
22-Apr	1.3	1.3	1.3	7.8	7.8	7.8	231	244	237
23-Apr	1.4	1.5	1.4	7.8	7.8	7.8	235	253	243
24-Apr	3.9	4.5	4.1	7.7	8.0	7.8	82	110	94
25-Apr	3.5	3.7	3.5	7.8	7.9	7.9	201	241	224
26-Apr	5.9	6.0	6.0	7.9	7.9	7.9	227	244	236
27-Apr	6.0	6.0	6.0	7.8	7.9	7.9	242	257	250
28-Apr	7.4	7.5	7.4	7.9	7.9	7.9	221	233	227
29-Apr	8.9	8.9	8.9	7.9	7.9	7.9	222	239	230
30-Apr	9.1	9.2	9.1	7.9	7.9	7.9	218	227	224
Monthly Min/Max/Avg.	0.6	9.2	2.1	7.6	8.0	7.8	82	257	218

1.2.5 Rossdale Filters 1 - 9 Particle Counts (no./mL >2um)

April 2024

Filter	1			2			3			4			5			6			7			8			9		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	1	2	1	1	10	1	1	1	1	1	1	1	1	1	1	1	3	1	1	24	6	1	2	1	1	1	1
2	1	14	7	1	1	1	1	17	2	1	17	3	1	23	12	1	1	1	1	4	1	1	1	1	1	23	12
3	1	8	2	--	--	--	1	3	1	1	8	1	1	3	1	1	1	1	1	2	1	1	26	4	1	4	2
4	1	6	1	2	11	4	1	6	1	1	3	1	1	33	3	1	21	2	1	23	3	1	3	2	1	1	1
5	1	3	1	--	--	--	1	19	1	1	14	4	1	5	3	1	2	1	1	4	2	1	2	1	1	18	6
6	1	2	1	--	--	--	1	10	2	1	7	2	1	5	2	1	2	1	1	4	1	1	2	1	3	16	5
7	1	16	3	--	--	--	1	3	2	1	22	7	1	25	7	5	25	9	1	10	4	5	25	9	2	6	4
8	4	22	8	3	19	5	1	2	1	6	19	11	6	14	10	4	8	6	--	--	--	3	8	5	1	4	3
9	1	8	4	1	4	2	1	2	1	3	28	7	2	11	6	--	--	--	3	30	8	1	6	3	1	4	2
10	1	4	1	1	2	1	1	19	3	1	5	2	1	3	2	1	17	4	1	6	2	1	2	1	--	--	--
11	1	2	1	1	16	2	1	8	2	1	2	1	--	--	--	1	3	2	1	2	1	2	23	5	1	13	7
12	3	12	5	1	9	2	1	2	1	1	2	1	5	30	9	1	2	1	1	26	5	2	6	3	1	4	2
13	1	8	4	1	3	2	1	17	2	--	--	--	3	18	6	15	18	16	3	22	5	1	15	5	1	4	2
14	1	4	2	1	2	1	1	4	2	3	16	5	2	9	4	2	15	4	1	7	3	--	--	--	--	--	--
15	1	2	1	--	--	--	1	8	2	2	5	3	2	6	3	1	4	2	1	5	2	3	22	7	1	13	4
16	--	--	--	2	16	4	1	2	1	1	6	3	6	19	9	1	3	2	1	3	2	3	7	5	2	5	4
17	3	12	5	1	4	2	--	--	--	1	3	2	3	9	6	1	2	1	5	26	8	2	5	4	1	4	2
18	1	5	3	1	3	2	2	13	5	--	--	--	2	6	4	4	17	8	3	7	5	1	4	2	1	3	2
19	1	25	4	1	27	3	1	4	3	3	15	5	1	24	6	2	7	4	1	4	3	1	8	6	1	24	5
20	2	7	4	1	4	3	--	--	--	2	6	4	3	9	6	4	19	7	4	31	7	3	6	4	2	7	4
21	2	5	3	1	3	2	3	10	5	2	24	6	2	6	4	3	7	5	3	6	4	26	33	30	1	6	3
22	1	7	2	6	15	8	3	7	5	4	9	7	2	34	12	2	6	4	3	15	5	6	35	11	1	4	3
23	--	--	--	3	8	5	1	9	2	1	7	4	5	14	8	1	4	2	1	27	5	2	16	6	5	26	8
24	3	21	7	1	6	3	1	18	2	1	3	2	2	8	4	--	--	--	2	12	6	1	4	2	2	7	4
25	3	11	5	1	3	2	3	8	5	--	--	--	1	4	3	3	14	7	2	8	5	1	29	10	2	6	3
26	3	7	5	1	3	2	3	6	4	5	15	8	12	29	16	6	11	8	3	7	5	6	12	8	2	5	3
27	2	6	4	3	21	7	2	6	4	4	12	8	5	16	11	2	9	6	3	6	5	3	11	7	3	25	9
28	2	25	5	1	4	3	3	26	6	2	6	3	2	8	4	1	4	2	4	21	7	1	5	3	2	6	3
29	2	5	3	1	4	2	2	5	3	2	20	7	2	4	3	5	19	8	3	7	5	6	22	9	1	4	2
30	1	21	5	1	19	5	2	5	3	4	11	7	9	28	13	4	9	6	3	27	8	5	29	8	1	20	9
Monthly Min/Max/Avg	1	25	4	1	27	3	1	26	3	1	28	4	1	34	6	1	25	4	1	31	4	1	35	6	1	26	4

NOTE: ' -- ' indicates filter offline

1.2.6 E.L. Smith Filters 1 - 9 Particle Counts (no./mL >2um)

April 2024

Filter	1			2			3			4			5			6			7			8			9		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	1	5	1	1	35	4	1	29	5	1	3	1	--	--	--	1	28	4	1	27	5	1	31	3	1	29	3
2	1	34	5	1	30	3	1	30	4	1	27	1	--	--	--	1	39	5	1	29	3	1	30	3	1	5	2
3	1	3	1	1	5	1	1	19	2	1	8	2	--	--	--	1	36	4	2	22	5	1	31	5	1	27	4
4	1	31	4	1	34	4	1	30	5	1	33	4	--	--	--	1	9	3	2	30	4	1	6	3	1	26	3
5	1	3	1	1	43	3	1	4	2	1	6	2	--	--	--	1	37	6	2	29	6	2	30	5	1	28	4
6	1	45	5	1	31	3	1	31	5	1	1	1	--	--	--	1	12	3	1	35	8	1	32	7	1	30	5
7	1	42	2	1	42	3	1	43	2	1	34	5	--	--	--	5	37	12	2	23	8	2	14	5	1	12	4
8	1	34	3	1	15	3	1	41	4	1	34	2	--	--	--	1	12	5	2	41	17	3	34	14	1	35	8
9	1	34	4	1	37	3	1	37	4	1	15	2	--	--	--	1	1	1	3	27	8	2	32	6	1	10	3
10	1	1	1	1	34	4	1	35	5	1	28	4	--	--	--	--	--	--	2	9	3	1	27	4	1	29	3
11	1	45	5	1	37	5	1	4	1	1	33	3	--	--	--	--	--	--	3	30	6	1	8	4	1	29	4
12	1	35	2	1	5	1	1	32	6	1	7	2	--	--	--	--	--	--	1	28	6	1	33	5	1	27	3
13	1	12	3	1	38	6	1	39	6	1	36	5	--	--	--	--	--	--	1	26	4	1	31	4	1	6	3
14	1	36	6	1	40	3	1	5	2	1	4	2	--	--	--	--	--	--	1	7	3	2	34	5	1	30	4
15	1	9	3	1	19	5	2	35	8	1	37	7	--	--	--	--	--	--	3	36	7	1	31	4	1	27	5
16	1	39	11	1	42	6	1	4	2	1	9	4	--	--	--	--	--	--	3	32	9	2	17	6	1	31	6
17	1	40	3	1	13	4	1	39	7	1	21	3	--	--	--	--	--	--	2	27	5	1	30	5	1	27	5
18	1	12	3	1	21	3	1	24	3	1	19	3	--	--	--	--	--	--	2	29	5	1	22	4	1	30	5
19	1	22	3	1	17	3	1	20	4	1	8	3	--	--	--	--	--	--	2	31	5	1	24	5	1	29	4
20	1	18	2	1	15	2	1	22	3	1	19	3	--	--	--	--	--	--	1	31	5	1	28	3	1	26	4
21	1	24	4	1	32	3	1	26	4	1	21	4	--	--	--	--	--	--	1	30	5	1	14	4	1	30	5
22	1	33	5	1	38	5	2	31	6	1	30	7	--	--	--	--	--	--	1	32	12	2	29	9	1	34	11
23	1	16	5	1	18	5	1	21	6	1	12	4	--	--	--	--	--	--	1	36	9	2	34	7	1	33	7
24	1	25	6	1	31	2	1	19	5	1	35	7	--	--	--	5	25	10	1	31	11	3	29	8	1	35	4
25	1	11	3	1	16	5	2	10	5	1	8	4	--	--	--	2	8	4	3	36	9	3	35	8	2	33	8
26	1	30	6	1	25	5	1	20	7	1	23	7	--	--	--	1	30	7	2	16	7	3	16	7	2	30	9
27	1	7	3	1	18	4	3	24	7	3	20	6	--	--	--	1	7	3	2	34	10	1	33	9	1	30	7
28	1	37	6	1	39	5	1	26	6	1	16	4	--	--	--	2	19	8	2	33	12	1	30	7	1	34	6
29	1	30	7	1	21	3	1	17	7	1	29	9	--	--	--	2	24	9	4	34	17	5	29	12	3	34	11
30	1	24	3	1	15	5	1	21	6	1	20	5	--	--	--	1	17	6	3	29	10	3	20	8	2	36	8
Monthly Min/Max/Avg	1	45	4	1	43	4	1	43	5	1	37	4	--	--	--	1	39	6	1	41	7	1	35	6	1	36	5

NOTES: ' -- ' indicates filter offline

1.2.7 E.L. Smith Filters 10 - 18 Particle Counts (no./mL >2um)

April 2024

Filter	10			11			12			13			14			15			16			17			18		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	1	4	2	1	4	2	1	22	3	1	22	3	1	12	4	1	18	2	1	13	3	1	15	3	1	10	3
2	1	23	3	1	29	3	1	26	3	1	4	2	1	6	3	1	7	3	1	25	4	1	20	2	1	12	4
3	1	28	4	1	28	3	1	23	4	1	22	4	1	16	5	1	24	4	1	27	4	1	22	3	1	12	4
4	1	20	2	1	27	3	1	21	3	1	26	3	2	18	4	1	18	3	1	9	3	1	7	2	1	8	2
5	1	13	3	1	30	4	1	24	3	1	5	3	1	20	4	1	7	4	1	30	5	1	23	4	1	11	5
6	1	27	6	1	4	2	1	24	6	3	26	6	3	9	6	1	15	6	1	29	8	1	3	2	1	20	2
7	1	7	2	2	31	6	2	28	6	1	33	6	4	23	12	1	36	6	1	20	5	2	29	6	3	22	7
8	2	33	10	1	31	8	3	29	9	1	11	6	4	31	11	1	16	7	5	35	15	1	26	7	2	22	6
9	1	27	5	2	29	5	1	26	4	1	30	5	1	25	7	1	25	5	1	26	5	1	22	4	1	15	5
10	1	28	4	1	15	3	1	3	1	1	14	3	1	19	5	1	19	3	1	10	2	1	6	2	1	16	4
11	1	6	2	1	26	3	1	27	3	1	27	2	1	21	6	1	9	2	1	26	4	1	24	4	1	13	4
12	1	29	4	1	29	4	1	27	4	1	10	4	1	7	3	1	29	5	1	25	3	1	21	3	1	6	3
13	1	25	3	1	25	2	1	26	3	1	25	3	1	17	4	1	25	2	1	6	2	1	5	2	1	21	4
14	1	29	4	1	28	4	1	25	4	1	26	4	1	17	5	1	29	4	1	25	4	1	23	3	1	11	4
15	1	6	2	1	27	4	1	26	5	1	25	4	1	25	6	1	13	4	1	25	5	1	25	4	1	14	4
16	1	34	7	1	29	5	2	32	6	1	10	4	1	25	6	2	31	7	1	27	6	1	32	6	1	9	4
17	1	29	3	1	28	7	1	28	4	1	30	5	1	14	6	1	12	3	1	15	4	1	12	3	1	38	5
18	1	26	4	1	30	5	1	27	5	1	26	4	1	16	5	1	14	4	1	18	4	1	25	4	1	10	3
19	1	15	3	1	22	4	1	26	4	1	28	4	1	14	6	1	17	4	1	16	5	1	12	3	1	10	3
20	1	23	3	1	27	3	1	28	5	1	24	3	1	16	4	1	20	4	1	23	4	1	16	3	1	9	3
21	1	30	5	1	29	4	1	28	5	1	28	4	1	24	5	1	32	5	1	31	3	1	22	4	1	13	4
22	2	43	7	2	27	7	1	33	8	1	33	10	1	17	7	1	39	9	1	21	7	1	35	4	1	31	9
23	1	27	8	1	35	9	1	32	6	1	29	7	1	33	9	1	33	7	1	28	6	1	34	7	1	25	7
24	3	27	13	2	19	10	3	28	13	1	13	6	6	32	14	2	19	9	2	9	5	1	28	10	2	16	7
25	2	28	7	3	29	7	2	25	6	1	32	6	3	23	8	2	19	6	2	34	7	1	19	4	1	31	6
26	1	10	4	2	24	6	2	28	6	2	31	7	3	12	7	3	31	8	1	29	7	2	34	6	2	18	5
27	1	30	7	1	31	5	1	27	7	2	24	7	2	27	10	2	16	7	1	22	7	1	18	6	1	17	6
28	1	15	6	1	27	7	2	17	7	2	11	5	2	28	13	2	11	6	2	13	6	1	19	6	1	18	8
29	3	23	8	1	28	9	4	27	11	2	29	10	5	25	12	2	27	12	2	23	10	2	21	8	1	11	6
30	1	28	5	1	30	5	2	27	7	1	22	6	3	23	10	1	16	6	1	21	7	1	14	5	2	14	6
Monthly Min/Max/Avg	1	43	5	1	35	5	1	33	5	1	33	5	1	33	7	1	39	5	1	35	5	1	35	4	1	38	5

NOTES: ' -- ' indicates filter offline

1.2.8 Rossdale Filters 1 - 9 Turbidity (NTU)

April 2024

Filter	1			2			3			4			5			6			7			8			9		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	0.02	0.02	0.02	0.02	0.05	0.03	0.01	0.07	0.01	0.01	0.02	0.01	0.02	0.03	0.03	0.01	0.01	0.01	0.03	0.06	0.03	0.02	0.02	0.02	0.02	0.02	0.02
2	0.02	0.03	0.02	0.02	0.04	0.02	0.01	0.04	0.02	0.01	0.04	0.02	0.02	0.06	0.03	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.05	0.02
3	0.02	0.04	0.02	--	--	--	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.03	0.02	0.01	0.01	0.01	0.02	0.03	0.02	0.02	0.05	0.02	0.02	0.03	0.02
4	0.02	0.04	0.02	0.03	0.05	0.03	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.05	0.03	0.01	0.04	0.01	0.02	0.05	0.03	0.02	0.02	0.02	0.02	0.02	0.02
5	0.02	0.02	0.02	--	--	--	0.01	0.01	0.01	0.02	0.04	0.02	0.03	0.04	0.03	0.01	0.02	0.01	0.03	0.05	0.03	0.01	0.02	0.02	0.02	0.02	0.02
6	0.02	0.02	0.02	--	--	--	0.02	0.05	0.02	0.02	0.04	0.02	0.03	0.03	0.03	0.01	0.05	0.01	0.03	0.03	0.03	0.02	0.03	0.02	0.03	0.05	0.03
7	0.02	0.02	0.02	--	--	--	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.07	0.04	0.02	0.06	0.03	0.03	0.04	0.03	0.02	0.05	0.03	0.02	0.03	0.02
8	0.03	0.05	0.03	0.03	0.05	0.03	0.01	0.02	0.01	0.02	0.03	0.02	0.03	0.04	0.03	0.01	0.02	0.02	--	--	--	0.02	0.02	0.02	0.02	0.02	0.02
9	0.02	0.04	0.03	0.03	0.03	0.03	0.01	0.04	0.01	0.02	0.05	0.02	0.03	0.08	0.03	--	--	--	0.03	0.06	0.03	0.02	0.02	0.02	0.02	0.02	0.02
10	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.01	0.02	0.02	0.03	0.03	0.03	0.01	0.04	0.02	0.02	0.03	0.03	0.02	0.02	0.02	--	--	--
11	0.02	0.03	0.02	0.02	0.05	0.03	0.01	0.02	0.02	0.01	0.01	0.01	--	--	--	0.01	0.03	0.01	0.02	0.03	0.02	0.02	0.05	0.03	0.02	0.05	0.03
12	0.03	0.05	0.03	0.03	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.01	0.03	0.08	0.04	0.01	0.04	0.01	0.02	0.06	0.03	0.02	0.02	0.02	0.02	0.04	0.02
13	0.02	0.06	0.03	0.02	0.03	0.03	0.01	0.05	0.02	--	--	--	0.03	0.07	0.03	0.04	0.04	0.04	0.03	0.07	0.03	0.02	0.02	0.02	0.02	0.02	0.02
14	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.07	0.03	0.01	0.04	0.02	0.02	0.03	0.03	--	--	--	--	--	--
15	0.02	0.03	0.02	--	--	--	0.01	0.02	0.01	0.01	0.03	0.02	0.03	0.07	0.04	0.01	0.01	0.01	0.02	0.03	0.03	0.02	0.04	0.03	0.02	0.05	0.03
16	--	--	--	0.03	0.05	0.03	0.01	0.01	0.01	0.01	0.03	0.01	0.03	0.06	0.03	0.01	0.01	0.01	0.02	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02
17	0.02	0.06	0.03	0.02	0.03	0.03	--	--	--	0.01	0.03	0.01	0.03	0.05	0.03	0.01	0.05	0.01	0.03	0.05	0.04	0.02	0.07	0.02	0.02	0.02	0.02
18	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.04	0.02	--	--	--	0.03	0.03	0.03	0.02	0.05	0.02	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02
19	0.02	0.02	0.02	0.02	0.04	0.03	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.06	0.03	0.01	0.03	0.02	0.02	0.03	0.03	0.03	0.04	0.06	0.02	0.04	0.03
20	0.02	0.03	0.03	0.03	0.03	0.03	--	--	--	0.01	0.02	0.02	0.03	0.03	0.03	0.02	0.06	0.02	0.03	0.07	0.03	0.02	0.03	0.02	0.02	0.02	0.02
21	0.02	0.02	0.02	0.03	0.06	0.03	0.02	0.04	0.02	0.01	0.06	0.02	0.02	0.03	0.03	0.01	0.03	0.02	0.03	0.04	0.03	0.05	0.06	0.06	0.02	0.02	0.02
22	0.02	0.02	0.02	0.04	0.06	0.05	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.07	0.04	0.01	0.02	0.01	0.03	0.04	0.03	0.02	0.05	0.03	0.02	0.02	0.02
23	--	--	--	0.02	0.04	0.03	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.03	0.03	0.01	0.02	0.01	0.02	0.05	0.03	0.02	0.02	0.02	0.02	0.05	0.03
24	0.02	0.05	0.02	0.02	0.03	0.02	0.01	0.04	0.01	0.01	0.02	0.01	0.02	0.04	0.03	--	--	--	0.02	0.04	0.03	0.01	0.02	0.02	0.02	0.02	0.02
25	0.02	0.02	0.02	0.02	0.03	0.02	0.01	0.02	0.02	--	--	--	0.02	0.04	0.03	0.01	0.03	0.02	0.02	0.03	0.03	0.02	0.04	0.03	0.02	0.02	0.02
26	0.02	0.03	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.05	0.04	0.01	0.04	0.01	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02
27	0.02	0.07	0.02	0.03	0.05	0.04	0.01	0.08	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.01	0.01	0.01	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.05	0.03
28	0.02	0.06	0.03	0.03	0.03	0.03	0.02	0.05	0.03	0.01	0.02	0.01	0.02	0.03	0.02	0.01	0.04	0.01	0.03	0.05	0.04	0.02	0.02	0.02	0.02	0.02	0.02
29	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.05	0.03	0.02	0.04	0.03	0.02	0.04	0.02	0.03	0.03	0.03	0.03	0.05	0.03	0.02	0.02	0.02
30	0.02	0.07	0.03	0.03	0.07	0.04	0.01	0.02	0.01	0.02	0.04	0.02	0.04	0.06	0.04	0.02	0.04	0.02	0.03	0.07	0.04	0.03	0.08	0.03	0.02	0.05	0.04
Monthly Min/Max/Avg	0.02	0.07	0.02	0.02	0.07	0.03	0.01	0.08	0.02	0.01	0.06	0.02	0.02	0.08	0.03	0.01	0.06	0.02	0.02	0.07	0.03	0.01	0.08	0.02	0.01	0.05	0.02

NOTES: ' -- ' indicates filter offline

1.2.9 E.L. Smith Filters 1 - 9 Turbidity (NTU)

April 2024

Filter	1			2			3			4			5			6			7			8			9		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	0.01	0.03	0.01	0.03	0.06	0.03	0.01	0.03	0.01	0.02	0.03	0.03	--	--	--	0.03	0.05	0.03	0.01	0.05	0.01	0.02	0.06	0.02	0.01	0.04	0.00
2	0.01	0.04	0.02	0.02	0.06	0.03	0.01	0.03	0.01	0.02	0.05	0.03	--	--	--	0.03	0.05	0.03	0.01	0.04	0.00	0.01	0.06	0.02	0.01	0.00	0.00
3	0.01	0.01	0.01	0.02	0.05	0.03	0.01	0.02	0.01	0.02	0.03	0.03	--	--	--	0.02	0.05	0.03	0.01	0.05	0.01	0.01	0.06	0.02	0.01	0.03	0.01
4	0.01	0.04	0.02	0.02	0.06	0.03	0.00	0.03	0.01	0.02	0.05	0.03	--	--	--	0.02	0.04	0.03	0.01	0.05	0.00	0.01	0.03	0.02	0.01	0.04	0.00
5	0.01	0.01	0.01	0.03	0.06	0.03	0.01	0.01	0.01	0.02	0.04	0.03	--	--	--	0.03	0.04	0.03	0.01	0.05	0.01	0.02	0.06	0.02	0.01	0.04	0.01
6	0.01	0.03	0.02	0.03	0.06	0.03	0.01	0.03	0.01	0.02	0.03	0.02	--	--	--	0.02	0.04	0.03	0.01	0.05	0.01	0.02	0.07	0.03	0.01	0.05	0.01
7	0.01	0.05	0.01	0.02	0.06	0.03	0.00	0.03	0.01	0.02	0.05	0.03	--	--	--	0.04	0.05	0.04	0.01	0.02	0.00	0.02	0.03	0.02	0.01	0.01	0.00
8	0.01	0.03	0.02	0.03	0.04	0.03	0.01	0.03	0.01	0.02	0.05	0.03	--	--	--	0.03	0.04	0.03	0.01	0.04	0.01	0.02	0.07	0.03	0.01	0.05	0.01
9	0.01	0.04	0.02	0.02	0.07	0.03	0.01	0.03	0.01	0.02	0.04	0.03	--	--	--	0.03	0.03	0.03	0.01	0.05	0.01	0.02	0.07	0.03	0.01	0.01	0.00
10	0.01	0.04	0.01	0.02	0.06	0.03	0.00	0.03	0.01	0.02	0.05	0.03	--	--	--	--	--	--	0.01	0.01	0.00	0.01	0.06	0.02	0.01	0.04	0.01
11	0.01	0.04	0.02	0.02	0.06	0.03	0.01	0.01	0.01	0.02	0.06	0.03	--	--	--	--	--	--	0.00	0.05	0.01	0.01	0.06	0.02	0.01	0.04	0.01
12	0.01	0.04	0.01	0.02	0.04	0.03	0.01	0.04	0.01	0.02	0.03	0.03	--	--	--	--	--	--	0.01	0.05	0.01	0.01	0.06	0.03	0.01	0.05	0.00
13	0.01	0.03	0.02	0.02	0.06	0.04	0.01	0.04	0.01	0.02	0.05	0.03	--	--	--	--	--	--	0.01	0.04	0.01	0.01	0.06	0.02	0.01	0.01	0.00
14	0.01	0.04	0.02	0.03	0.07	0.03	0.01	0.01	0.01	0.02	0.06	0.03	--	--	--	--	--	--	0.01	0.02	0.00	0.02	0.06	0.03	0.01	0.04	0.01
15	0.01	0.03	0.02	0.03	0.06	0.04	0.01	0.04	0.02	0.02	0.06	0.03	--	--	--	--	--	--	0.00	0.05	0.01	0.02	0.06	0.02	0.01	0.05	0.01
16	0.01	0.05	0.03	0.03	0.07	0.04	0.01	0.03	0.01	0.03	0.03	0.03	--	--	--	--	--	--	0.00	0.05	0.01	0.01	0.04	0.02	0.01	0.05	0.01
17	0.01	0.06	0.02	0.03	0.04	0.03	0.01	0.05	0.02	0.02	0.07	0.03	--	--	--	--	--	--	0.01	0.05	0.01	0.01	0.06	0.03	0.01	0.05	0.01
18	0.01	0.03	0.02	0.03	0.07	0.03	0.00	0.06	0.01	0.02	0.06	0.03	--	--	--	--	--	--	0.01	0.05	0.01	0.01	0.08	0.03	0.01	0.05	0.01
19	0.01	0.07	0.02	0.03	0.08	0.04	0.01	0.06	0.01	0.02	0.04	0.03	--	--	--	--	--	--	0.00	0.07	0.01	0.02	0.08	0.03	0.01	0.06	0.01
20	0.01	0.07	0.02	0.03	0.08	0.03	0.01	0.06	0.01	0.02	0.07	0.03	--	--	--	--	--	--	0.01	0.07	0.01	0.02	0.08	0.03	0.01	0.05	0.01
21	0.01	0.06	0.02	0.03	0.08	0.03	0.01	0.05	0.01	0.02	0.08	0.03	--	--	--	--	--	--	0.01	0.05	0.01	0.02	0.05	0.02	0.01	0.05	0.01
22	0.01	0.06	0.02	0.03	0.08	0.03	0.01	0.05	0.01	0.02	0.06	0.03	--	--	--	--	--	--	0.01	0.05	0.01	0.02	0.06	0.03	0.01	0.05	0.01
23	0.01	0.03	0.01	0.03	0.05	0.03	0.01	0.03	0.01	0.02	0.03	0.02	--	--	--	--	--	--	0.01	0.05	0.01	0.02	0.07	0.02	0.01	0.05	0.01
24	0.01	0.07	0.02	0.03	0.08	0.03	0.01	0.04	0.01	0.02	0.07	0.03	--	--	--	0.04	0.07	0.05	0.01	0.07	0.02	0.02	0.06	0.03	0.01	0.00	0.01
25	0.01	0.03	0.01	0.03	0.06	0.03	0.01	0.01	0.01	0.02	0.03	0.02	--	--	--	0.03	0.04	0.03	0.00	0.05	0.01	0.02	0.07	0.03	0.00	0.05	0.01
26	0.01	0.07	0.02	0.03	0.07	0.03	0.01	0.05	0.01	0.02	0.06	0.03	--	--	--	0.03	0.08	0.04	0.00	0.03	0.01	0.01	0.06	0.02	0.01	0.05	0.01
27	0.01	0.02	0.01	0.03	0.05	0.03	0.01	0.05	0.02	0.02	0.06	0.03	--	--	--	0.03	0.03	0.03	0.01	0.05	0.01	0.01	0.07	0.03	0.01	0.06	0.01
28	0.01	0.08	0.02	0.03	0.07	0.04	0.01	0.07	0.02	0.02	0.04	0.03	--	--	--	0.03	0.07	0.04	0.01	0.07	0.02	0.02	0.07	0.03	0.01	0.07	0.01
29	0.01	0.07	0.03	0.03	0.08	0.03	0.01	0.03	0.02	0.02	0.08	0.04	--	--	--	0.03	0.08	0.04	0.00	0.06	0.02	0.02	0.08	0.03	0.00	0.07	0.02
30	0.01	0.07	0.02	0.03	0.07	0.04	0.01	0.07	0.02	0.02	0.07	0.03	--	--	--	0.03	0.08	0.04	0.00	0.07	0.01	0.01	0.07	0.03	0.00	0.06	0.01
Monthly Min/Max/Avg	0.01	0.08	0.02	0.02	0.08	0.03	0.00	0.07	0.01	0.02	0.08	0.03	--	--	--	0.02	0.08	0.03	0.01	0.07	0.01	0.01	0.08	0.03	0.01	0.07	0.01

NOTES: ' -- ' indicates filter offline

1.2.10 E.L. Smith Filters 10 - 18 Turbidity (NTU)

April 2024

Filter	10			11			12			13			14			15			16			17			18		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	0.02	0.03	0.02	0.01	0.01	0.00	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.05	0.04	0.03	0.07	0.04	0.05	0.06	0.05
2	0.02	0.06	0.03	0.01	0.05	0.00	0.00	0.04	0.01	0.03	0.03	0.03	0.04	0.05	0.04	0.03	0.05	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
3	0.02	0.06	0.03	0.01	0.05	0.01	0.00	0.04	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
4	0.02	0.06	0.02	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.04	0.04	0.03	0.05	0.04	0.05	0.05	0.05
5	0.02	0.06	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.03	0.03	0.04	0.08	0.05	0.03	0.04	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
6	0.02	0.07	0.03	0.01	0.01	0.00	0.00	0.05	0.01	0.03	0.07	0.03	0.04	0.05	0.05	0.03	0.07	0.04	0.03	0.08	0.04	0.03	0.03	0.03	0.05	0.08	0.05
7	0.02	0.03	0.02	0.01	0.06	0.01	0.01	0.06	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.04	0.04	0.03	0.08	0.04	0.05	0.08	0.05
8	0.03	0.07	0.03	0.01	0.06	0.01	0.01	0.06	0.02	0.03	0.03	0.03	0.04	0.08	0.05	0.03	0.04	0.04	0.04	0.08	0.04	0.03	0.08	0.04	0.05	0.08	0.05
9	0.02	0.08	0.03	0.01	0.06	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.07	0.05	0.03	0.08	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.06	0.05
10	0.02	0.07	0.03	0.01	0.04	0.00	0.00	0.01	0.00	0.03	0.05	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.04	0.03	0.03	0.04	0.03	0.05	0.08	0.05
11	0.02	0.05	0.02	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.04	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
12	0.02	0.07	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.04	0.03	0.04	0.05	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.05	0.05
13	0.02	0.06	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.04	0.03	0.03	0.04	0.03	0.05	0.08	0.05
14	0.02	0.07	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.05	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
15	0.02	0.04	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.06	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
16	0.02	0.07	0.03	0.01	0.05	0.01	0.01	0.05	0.01	0.03	0.03	0.03	0.04	0.08	0.05	0.04	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.05	0.05
17	0.02	0.08	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.05	0.03	0.04	0.06	0.05	0.03	0.08	0.04	0.03	0.08	0.04	0.03	0.08	0.04	0.05	0.08	0.05
18	0.02	0.08	0.03	0.01	0.07	0.02	0.01	0.06	0.02	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.08	0.04	0.03	0.08	0.04	0.03	0.08	0.04	0.05	0.08	0.05
19	0.02	0.08	0.03	0.01	0.08	0.01	0.00	0.07	0.02	0.03	0.07	0.03	0.04	0.08	0.05	0.04	0.08	0.04	0.03	0.08	0.04	0.03	0.08	0.04	0.05	0.08	0.06
20	0.02	0.07	0.03	0.01	0.07	0.01	0.01	0.06	0.02	0.03	0.07	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.08	0.04	0.03	0.08	0.04	0.05	0.08	0.05
21	0.02	0.08	0.03	0.01	0.06	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.05	0.08	0.05
22	0.02	0.07	0.03	0.01	0.05	0.01	0.00	0.05	0.01	0.03	0.06	0.03	0.04	0.06	0.05	0.03	0.06	0.04	0.03	0.06	0.04	0.03	0.08	0.04	0.05	0.08	0.05
23	0.02	0.07	0.03	0.01	0.06	0.01	0.00	0.06	0.01	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.07	0.04	0.03	0.07	0.04	0.03	0.07	0.04	0.04	0.08	0.05
24	0.03	0.06	0.04	0.01	0.02	0.01	0.01	0.05	0.02	0.03	0.03	0.03	0.05	0.08	0.06	0.03	0.05	0.04	0.03	0.04	0.04	0.03	0.08	0.05	0.04	0.06	0.05
25	0.02	0.07	0.03	0.00	0.06	0.01	0.01	0.06	0.02	0.03	0.06	0.03	0.04	0.08	0.05	0.03	0.08	0.04	0.04	0.08	0.04	0.03	0.08	0.04	0.04	0.08	0.05
26	0.02	0.03	0.03	0.01	0.06	0.01	0.00	0.06	0.01	0.03	0.06	0.03	0.04	0.05	0.05	0.03	0.08	0.04	0.04	0.08	0.04	0.04	0.06	0.04	0.05	0.08	0.05
27	0.02	0.07	0.03	0.01	0.07	0.01	0.00	0.07	0.02	0.03	0.07	0.03	0.04	0.08	0.05	0.04	0.08	0.04	0.04	0.08	0.04	0.03	0.08	0.04	0.05	0.07	0.05
28	0.02	0.08	0.03	0.01	0.08	0.01	0.01	0.06	0.02	0.03	0.04	0.03	0.05	0.08	0.06	0.04	0.05	0.04	0.04	0.05	0.04	0.03	0.08	0.04	0.05	0.08	0.06
29	0.03	0.08	0.04	0.00	0.08	0.02	0.01	0.08	0.03	0.03	0.07	0.04	0.05	0.08	0.06	0.03	0.08	0.05	0.04	0.08	0.05	0.04	0.08	0.05	0.05	0.06	0.05
30	0.02	0.08	0.03	0.01	0.08	0.01	0.01	0.07	0.02	0.03	0.07	0.03	0.04	0.08	0.05	0.04	0.07	0.05	0.04	0.08	0.04	0.03	0.06	0.04	0.05	0.08	0.06
Monthly Min/Max/Avg	0.02	0.08	0.03	0.01	0.08	0.01	0.00	0.08	0.01	0.03	0.07	0.03	0.04	0.08	0.05	0.03	0.08	0.04	0.03	0.08	0.04	0.03	0.08	0.04	0.04	0.08	0.05

NOTES: ' -- ' indicates filter offline

1.2.11 Combined Filter Effluent Water Quality

April 2024

Day	Rossdale						E.L. Smith					
	Particle Counts (no./mL,>2um)			Turbidity (NTU)			Particle Counts (no./mL,>2um)			Turbidity (NTU)		
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	1	3	1	0.04	0.05	0.05	2	6	3	0.02	0.03	0.03
2	1	4	1	0.04	0.05	0.04	2	28	3	0.02	0.03	0.02
3	1	4	1	0.04	0.05	0.04	2	6	3	0.02	0.03	0.02
4	1	6	1	0.04	0.05	0.04	2	6	3	0.02	0.03	0.02
5	1	4	1	0.04	0.05	0.04	2	6	4	0.02	0.03	0.03
6	1	4	2	0.04	0.06	0.04	3	10	5	0.02	0.03	0.03
7	2	11	5	0.01	0.06	0.05	2	12	5	0.02	0.03	0.02
8	4	8	5	0.04	0.05	0.05	6	12	8	0.02	0.03	0.03
9	2	8	4	0.04	0.09	0.05	2	9	5	0.02	0.03	0.03
10	1	5	2	0.04	0.06	0.05	2	5	3	0.02	0.03	0.02
11	1	8	5	0.04	0.07	0.05	2	6	4	0.02	0.03	0.02
12	1	6	3	0.03	0.04	0.04	3	5	4	0.02	0.03	0.03
13	2	7	4	0.04	0.08	0.04	2	7	4	0.02	0.03	0.02
14	2	5	3	0.03	0.07	0.04	3	7	4	0.02	0.03	0.02
15	2	6	3	0.03	0.07	0.04	4	7	5	0.02	0.03	0.03
16	2	6	4	0.03	0.04	0.03	4	9	6	0.02	0.03	0.03
17	3	7	4	0.03	0.04	0.03	3	8	4	0.02	0.03	0.03
18	3	5	4	0.03	0.04	0.03	3	7	4	0.02	0.03	0.03
19	1	13	4	0.04	0.05	0.05	2	6	4	0.02	0.03	0.03
20	3	8	5	0.04	0.04	0.04	3	5	3	0.02	0.03	0.03
21	3	8	4	0.04	0.05	0.03	3	7	4	0.02	0.03	0.03
22	4	10	6	0.04	0.09	0.06	5	13	8	0.02	0.03	0.03
23	3	8	5	0.04	0.09	0.05	4	12	7	0.02	0.03	0.03
24	2	9	4	0.04	0.08	0.05	1	12	4	0.03	0.05	0.04
25	3	8	5	0.04	0.08	0.05	4	10	6	0.02	0.03	0.03
26	5	9	7	0.04	0.08	0.05	5	9	7	0.02	0.03	0.03
27	4	9	7	0.03	0.05	0.03	4	11	6	0.02	0.03	0.03
28	3	7	4	0.05	0.06	0.05	5	9	7	0.02	0.04	0.03
29	3	7	4	0.05	0.07	0.06	6	12	9	0.03	0.04	0.03
30	4	15	8	0.06	0.07	0.06	5	8	6	0.03	0.03	0.03
Monthly Min/Max/Avg	1	15	4	0.01	0.09	0.04	1	28	5	0.02	0.05	0.03

NOTES: ' -- ' indicates plant offline

1.2.12 Rossdale UV Disinfection - Filters 1 - 3

April 2024

Filter	1						2						3						Transmittance (%)		
Day	Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)					
	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg
1	43.5	54.7	49.3	17.3	21.0	19.0	37.4	48.3	39.8	20.1	24.8	21.9	45.3	54.0	49.6	14.9	17.7	9.8	95.1	95.9	95.6
2	52.4	65.2	56.8	14.6	18.2	9.0	36.9	44.4	40.7	21.5	26.1	21.8	39.2	51.5	40.2	17.8	22.5	9.2	95.4	95.9	95.7
3	36.7	50.5	39.1	19.2	27.1	25.4	--	--	--	--	--	--	36.0	42.4	38.6	20.6	24.8	23.5	95.4	96.0	95.7
4	40.9	50.4	46.6	18.9	25.0	16.3	34.5	36.3	35.4	19.1	20.0	0.4	41.0	60.6	49.9	14.7	22.5	18.3	95.7	96.1	96.0
5	34.8	53.1	41.3	18.8	28.0	23.1	--	--	--	--	--	--	45.8	47.6	52.3	14.6	18.5	8.8	94.8	96.1	95.2
6	35.1	40.2	37.0	21.5	26.7	24.0	--	--	--	--	--	--	35.0	46.6	35.7	17.5	29.9	23.7	94.7	95.1	94.9
7	38.6	41.5	39.6	18.8	21.8	14.4	--	--	--	--	--	--	35.0	37.6	35.6	21.2	26.5	24.1	94.3	94.7	94.6
8	34.8	43.6	36.2	23.7	28.6	8.3	35.4	48.0	37.9	20.0	32.1	10.6	35.3	41.0	37.8	18.0	21.5	19.9	94.3	95.0	94.7
9	34.9	36.4	35.6	24.5	26.8	25.4	37.3	43.1	39.8	24.5	27.1	25.4	39.8	42.3	40.5	17.4	18.4	3.9	94.5	95.0	94.6
10	36.1	46.1	40.4	21.4	24.8	22.6	42.7	55.7	48.2	21.3	24.7	22.6	35.3	36.2	35.7	25.4	26.3	10.4	94.9	95.9	95.1
11	43.7	47.2	45.6	19.7	22.5	11.9	42.1	56.9	49.5	18.2	27.6	12.1	35.1	37.4	35.9	23.3	27.6	25.3	95.4	95.9	95.6
12	35.5	49.6	43.1	19.0	26.7	8.4	41.1	46.1	43.6	24.1	28.1	26.0	35.8	41.6	38.6	19.7	24.0	21.9	95.2	95.7	95.5
13	35.3	39.2	36.9	24.1	26.7	25.5	45.4	51.3	48.0	21.8	24.4	23.1	35.3	43.3	38.5	18.8	26.5	14.5	95.2	95.5	95.4
14	36.8	42.3	39.3	22.7	26.1	24.2	48.2	54.2	50.8	15.8	23.3	12.6	35.3	36.2	35.7	23.8	27.3	25.2	95.4	95.7	95.5
15	41.0	58.2	43.0	16.2	23.6	12.8	--	--	--	--	--	--	35.3	40.6	37.4	21.1	26.5	23.7	95.1	95.7	95.5
16	--	--	--	--	--	--	41.3	55.2	43.8	20.0	28.0	22.1	40.0	51.7	42.5	16.2	21.5	10.5	95.4	95.7	95.6
17	35.1	49.8	36.0	19.4	33.5	24.9	39.4	46.7	43.9	24.7	30.1	26.1	--	--	--	--	--	--	95.0	95.6	95.4
18	35.1	48.2	38.6	24.3	29.1	26.3	41.4	66.3	50.8	21.1	26.1	23.2	34.5	39.6	36.5	25.3	30.0	23.2	95.0	97.6	95.7
19	37.6	42.1	37.3	27.0	27.4	16.7	37.7	39.4	43.2	19.4	30.6	21.2	35.2	36.1	35.3	25.6	27.9	9.7	95.2	95.3	95.2
20	35.2	38.2	36.3	23.0	27.4	24.7	37.5	47.6	43.6	22.1	28.7	24.4	--	--	--	--	--	--	94.8	95.3	95.0
21	36.4	40.6	38.4	21.1	23.7	22.3	45.2	55.6	47.6	17.9	22.7	13.8	35.2	37.4	35.7	21.6	25.7	20.2	94.8	95.0	94.9
22	39.1	44.2	41.7	12.1	22.1	19.0	41.2	44.3	43.2	24.0	24.7	2.1	35.2	36.2	35.7	22.5	26.5	24.4	94.9	95.1	95.0
23	--	--	--	--	--	--	42.4	50.4	44.9	22.7	27.8	25.6	35.3	44.8	40.1	18.6	23.7	21.3	95.0	95.5	95.2
24	39.4	51.4	43.4	19.4	27.7	15.0	43.2	59.5	52.3	23.9	26.8	25.4	40.3	59.1	48.3	16.1	26.3	11.8	95.1	96.6	96.1
25	38.2	44.4	41.4	25.6	27.0	26.3	52.5	60.0	56.4	22.3	24.2	23.3	35.6	41.5	38.7	24.6	26.1	25.4	95.9	96.6	96.2
26	38.2	41.1	39.9	23.1	26.1	24.3	52.8	152.8	54.8	21.3	22.7	2.7	35.4	37.5	36.5	22.9	25.4	23.9	95.3	95.9	95.7
27	40.6	46.4	44.3	19.1	23.5	13.5	37.3	54.2	38.9	20.6	30.3	12.5	35.1	42.6	39.7	18.4	23.1	20.8	95.2	95.7	95.5
28	33.5	48.1	35.8	19.5	31.7	26.3	37.6	46.1	43.0	23.9	30.7	25.8	35.1	43.3	35.8	18.4	27.5	11.8	95.1	95.4	95.2
29	35.9	40.0	38.0	22.4	26.1	24.2	45.1	50.9	48.0	19.9	24.9	22.9	35.2	36.3	35.7	23.4	27.5	24.9	95.0	95.5	95.4
30	35.1	35.9	38.3	12.0	29.7	13.9	35.0	59.7	40.8	16.6	33.1	22.4	35.3	36.0	35.8	13.8	23.9	14.8	93.4	95.0	94.7
Monthly Total						547.7						469.8						504.8			
Monthly Min/Max/ Avg	33.5	65.2	40.7	12.0	33.5		34.5	152.8	45.2	15.8	33.1		34.5	60.6	39.2	13.8	30.0		93.4	97.6	95.4

NOTES: - Each filter has a UV reactor

- Transmittance (%) is a grab sample of the filter effluent prior to the UV reactor of a random online filter

' -- ' indicates filter and UV reactor offline

1.2.13 Rossdale UV Disinfection - Filters 4 - 6

April 2024

Filter	4						5						6						Transmittance (%)		
Day	Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)					
	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg
1	60.9	62.8	61.8	15.4	15.6	0.6	48.6	63.5	56.0	13.9	17.4	15.5	35.1	42.7	37.6	22.0	27.9	24.7	95.1	95.9	95.6
2	37.6	60.8	41.6	17.9	29.6	24.4	40.1	69.1	54.6	13.0	23.5	14.9	41.0	46.8	44.3	19.2	22.5	20.9	95.4	95.9	95.7
3	40.5	56.2	50.6	19.7	26.6	21.4	39.3	46.4	42.6	20.6	23.7	22.2	46.1	60.4	53.5	15.4	19.2	11.0	95.4	96.0	95.7
4	53.8	67.0	58.5	15.5	20.0	11.0	45.7	52.5	49.2	18.0	21.1	15.2	35.2	45.4	36.4	21.0	30.1	22.8	95.7	96.1	96.0
5	35.1	50.5	39.1	21.3	30.1	11.5	35.7	52.6	41.7	18.0	24.8	21.3	35.2	42.8	36.7	21.4	25.5	24.6	94.8	96.1	95.2
6	35.0	40.1	36.9	23.8	29.1	26.3	35.4	43.0	38.5	19.0	23.5	21.2	35.1	55.0	36.6	14.6	24.0	15.0	94.7	95.1	94.9
7	38.0	44.6	40.0	19.2	24.1	22.1	39.3	43.8	41.1	17.7	19.5	7.1	35.2	38.2	35.6	27.9	33.7	11.6	94.3	94.7	94.6
8	43.9	51.1	47.6	17.3	19.3	9.1	35.2	40.5	35.6	18.8	27.4	25.8	35.5	38.7	35.7	22.0	29.9	15.2	94.3	95.0	94.7
9	36.5	39.6	37.6	24.0	25.2	12.0	35.2	37.6	35.9	22.3	25.3	23.4	--	--	--	--	--	--	94.5	95.0	94.6
10	37.3	47.2	41.3	22.9	25.8	24.1	37.4	47.2	41.0	17.7	22.4	12.4	35.2	38.2	35.6	20.6	30.4	25.8	94.9	95.9	95.1
11	43.6	51.1	46.6	20.2	24.4	22.1	--	--	--	--	--	--	35.1	40.2	36.4	22.0	29.5	25.8	95.4	95.9	95.6
12	47.6	64.4	51.1	14.7	21.1	12.3	35.4	45.2	36.4	19.7	26.9	17.8	37.7	43.4	40.4	10.8	23.0	17.0	95.2	95.7	95.5
13	--	--	--	--	--	--	36.6	41.4	38.7	21.6	24.3	22.9	35.4	36.0	36.0	25.4	26.1	0.0	95.2	95.5	95.4
14	38.6	57.9	44.5	17.3	26.4	10.1	39.9	46.1	42.4	19.5	22.6	21.0	35.1	36.0	35.6	25.5	30.1	27.7	95.4	95.7	95.5
15	37.7	47.0	43.0	22.9	28.1	24.7	45.4	47.8	46.2	10.9	19.8	1.2	35.0	49.0	36.6	23.1	28.3	25.6	95.1	95.7	95.5
16	44.5	52.4	48.7	20.5	23.4	21.6	35.8	41.8	36.6	22.7	26.0	12.5	37.3	46.1	41.9	19.6	23.3	21.1	95.4	95.7	95.6
17	49.4	55.2	52.7	18.4	20.8	12.1	35.3	38.4	36.6	23.8	28.2	25.1	42.6	55.4	43.9	14.0	19.8	3.3	95.0	95.6	95.4
18	--	--	--	--	--	--	35.4	54.5	42.5	20.2	24.3	22.0	35.2	38.3	35.6	29.9	33.5	12.7	95.0	97.6	95.7
19	39.5	56.2	40.4	18.0	32.4	17.7	35.5	47.6	39.5	15.3	28.2	16.8	35.4	36.0	35.3	28.8	33.0	11.5	95.2	95.3	95.2
20	38.3	45.4	41.8	21.0	25.2	23.1	35.4	38.7	36.2	21.5	27.6	24.0	35.3	35.9	35.6	24.4	25.9	8.7	94.8	95.3	95.0
21	36.0	38.6	38.8	26.0	27.0	15.3	35.8	41.8	38.8	19.2	23.0	21.0	34.6	36.0	35.6	24.3	29.0	27.1	94.8	95.0	94.9
22	35.3	40.1	37.8	23.5	28.1	25.7	36.8	44.2	42.5	11.1	22.6	9.1	34.7	36.2	35.6	22.8	26.7	24.6	94.9	95.1	95.0
23	38.1	50.5	44.7	20.6	25.4	23.2	37.1	43.9	39.2	20.5	24.5	23.0	35.3	48.1	41.9	11.9	23.1	18.6	95.0	95.5	95.2
24	48.6	69.2	59.2	12.0	20.9	17.6	38.6	53.1	46.7	20.8	23.5	22.2	--	--	--	--	--	--	95.1	96.6	96.1
25	--	--	--	--	--	--	47.9	58.3	51.7	11.5	21.1	12.5	42.9	50.4	46.6	20.2	21.0	17.6	95.9	96.6	96.2
26	39.7	66.1	56.5	17.4	26.2	15.6	35.4	41.9	35.8	23.6	27.3	13.0	35.0	44.0	35.8	20.4	29.1	27.2	95.3	95.9	95.7
27	39.2	43.6	41.4	22.9	26.2	24.5	35.5	38.5	37.1	22.3	26.4	23.9	34.7	39.8	37.2	20.5	26.4	22.9	95.2	95.7	95.5
28	40.1	49.2	45.6	19.5	24.2	21.2	34.8	43.8	41.2	19.2	23.1	20.6	35.3	37.5	36.2	22.5	24.7	5.6	95.1	95.4	95.2
29	38.9	51.8	42.8	18.3	25.4	10.2	43.1	52.9	48.5	15.8	19.6	12.5	34.9	37.1	35.6	21.5	30.6	25.5	95.0	95.5	95.4
30	35.1	42.0	40.4	11.0	29.8	20.3	35.2	47.6	35.6	15.2	29.5	21.2	35.0	38.8	35.6	19.0	28.2	19.4	93.4	95.0	94.7
Monthly Total						479.9						521.5						513.7			
Monthly Min/Max/ Avg	35.0	69.2	45.6	11.0	32.4		34.8	69.1	41.7	10.9	29.5		34.6	60.4	38.2	10.8	33.7		93.4	97.6	95.4

NOTES: - Each filter has a UV reactor

- Transmittance (%) is a grab sample of the filter effluent prior to the UV reactor of a random online filter

' -- ' indicates filter and UV reactor offline

1.2.14 Rossdale UV Disinfection - Filters 7 - 9

April 2024

Filter	7						8						9						Transmittance (%)		
Day	Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)					
	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg
1	35.2	36.1	35.6	26.5	32.6	13.7	37.8	46.6	42.2	19.1	22.8	20.9	39.9	50.6	45.3	18.1	22.3	20.1	95.1	95.9	95.6
2	35.0	37.7	35.9	24.8	30.2	27.5	40.5	52.8	44.3	17.0	22.7	20.5	37.0	58.8	47.9	15.7	25.7	9.4	95.4	95.9	95.7
3	35.3	45.8	41.6	20.4	26.9	22.1	35.3	35.5	37.6	20.8	30.0	12.8	35.1	39.7	36.0	23.7	29.7	28.0	95.4	96.0	95.7
4	36.3	49.2	41.3	11.8	24.9	16.1	35.3	40.9	37.1	23.2	30.0	26.4	36.2	45.5	40.2	21.2	27.6	24.3	95.7	96.1	96.0
5	35.2	40.4	36.1	23.2	29.2	25.5	35.2	42.0	37.2	20.7	25.3	23.5	39.9	51.9	41.7	17.0	22.5	13.6	94.8	96.1	95.2
6	35.1	36.3	35.6	22.9	28.0	25.5	35.4	45.4	35.8	11.0	24.4	4.8	35.0	43.5	35.8	20.9	33.2	10.7	94.7	95.1	94.9
7	35.0	41.2	35.7	17.4	23.5	14.2	33.5	40.2	35.7	20.3	32.7	23.3	35.1	36.2	35.6	27.2	32.8	30.4	94.3	94.7	94.6
8	--	--	--	--	--	--	35.2	36.1	35.6	24.0	30.9	28.1	35.0	36.1	35.6	23.1	27.8	26.0	94.3	95.0	94.7
9	34.3	39.0	35.6	20.0	27.9	19.2	35.2	36.2	35.6	23.9	27.0	25.0	35.1	36.1	35.6	22.4	25.1	11.8	94.5	95.0	94.6
10	34.8	36.3	35.6	25.6	28.6	26.5	35.4	36.1	35.7	12.1	24.1	2.4	--	--	--	--	--	--	94.9	95.9	95.1
11	35.2	42.4	37.0	20.5	27.3	24.1	35.3	42.3	35.8	20.7	30.5	15.9	34.9	43.7	35.8	21.0	30.3	23.6	95.4	95.9	95.6
12	35.2	42.7	38.9	20.4	24.5	10.0	35.2	36.1	35.7	25.3	29.5	26.8	35.0	36.3	35.7	24.4	28.7	26.2	95.2	95.7	95.5
13	34.9	36.2	35.6	23.8	28.6	27.1	35.3	44.9	35.9	19.2	26.2	24.4	35.2	58.0	36.6	15.5	24.9	14.9	95.2	95.5	95.4
14	35.0	37.5	35.7	24.7	27.9	26.2	--	--	--	--	--	--	--	--	--	--	--	--	95.4	95.7	95.5
15	35.2	40.8	37.5	21.9	27.6	24.4	34.7	36.3	35.7	25.1	30.3	12.1	35.1	42.6	36.3	21.6	28.9	22.7	95.1	95.7	95.5
16	39.8	56.5	40.6	14.9	22.2	4.4	35.1	36.2	35.7	26.5	29.7	27.9	35.1	36.8	35.8	25.2	28.4	26.6	95.4	95.7	95.6
17	35.2	37.2	35.6	25.2	33.2	14.0	35.3	36.2	35.7	25.1	28.8	26.4	35.2	40.0	37.3	22.5	26.1	24.3	95.0	95.6	95.4
18	35.1	39.1	36.2	28.4	32.5	30.3	35.3	68.8	39.9	23.9	26.5	15.5	35.2	53.5	36.1	15.1	25.3	5.7	95.0	97.6	95.7
19	35.3	36.1	35.3	26.6	29.0	10.1	35.3	36.4	35.6	31.0	33.8	17.2	35.4	36.2	35.6	28.3	32.8	16.5	95.2	95.3	95.2
20	35.1	36.7	35.7	22.7	28.9	19.9	35.2	38.6	35.6	21.2	31.7	19.5	35.0	36.2	35.6	24.3	32.0	27.4	94.8	95.3	95.0
21	34.3	36.2	35.6	24.7	28.4	26.6	35.5	35.8	35.7	25.8	26.2	0.1	35.0	36.2	35.7	22.8	26.0	24.5	94.8	95.0	94.9
22	35.0	36.3	35.7	22.6	26.3	24.2	35.2	36.1	35.6	24.7	33.4	30.4	35.3	54.8	36.3	15.2	24.1	13.4	94.9	95.1	95.0
23	35.2	48.0	37.5	18.5	29.1	13.9	35.2	37.0	35.7	24.4	30.6	28.1	35.0	38.0	35.7	23.5	29.9	17.2	95.0	95.5	95.2
24	35.0	41.5	38.0	26.9	29.0	28.0	35.4	48.5	42.6	22.4	25.3	23.9	35.1	41.9	38.0	26.5	29.1	28.0	95.1	96.6	96.1
25	35.1	41.4	38.4	25.8	27.4	26.6	31.6	40.1	39.0	11.5	27.7	13.6	35.4	41.5	38.6	25.3	27.3	26.4	95.9	96.6	96.2
26	35.4	38.5	37.0	23.6	26.3	24.4	35.2	36.1	35.6	27.0	30.3	28.7	35.4	48.2	37.4	18.7	26.1	12.1	95.3	95.9	95.7
27	37.5	57.1	39.5	15.1	23.8	1.7	35.3	36.2	35.7	23.6	28.3	25.4	34.9	36.3	35.6	25.9	30.5	28.5	95.2	95.7	95.5
28	33.7	40.5	35.6	24.7	30.3	19.4	35.4	89.9	38.3	20.3	24.3	13.7	34.8	36.3	35.6	24.8	31.1	26.8	95.1	95.4	95.2
29	35.1	36.2	35.6	25.1	30.2	26.8	35.2	41.2	35.7	21.4	31.0	18.5	35.3	38.7	36.8	20.7	25.5	22.7	95.0	95.5	95.4
30	35.1	36.0	35.7	21.5	36.3	19.0	35.1	36.4	35.6	21.7	31.1	23.5	34.6	37.3	36.0	21.5	36.3	16.0	93.4	95.0	94.7
Monthly Total						591.3						579.4						577.7			
Monthly Min/Max/ Avg	33.7	57.1	36.9	11.8	36.3		31.6	89.9	37.0	11.0	33.8		34.6	58.8	37.3	15.1	36.3		93.4	97.6	95.4

NOTES: - Each filter has a UV reactor

- Transmittance (%) is a grab sample of the filter effluent prior to the UV reactor of a random online filter

' -- ' indicates filter and UV reactor offline

1.2.15 E.L. Smith UV Disinfection - UV Reactors 1 - 4

April 2024

Filter	1						2						3						4						Transmittance (%)		
Day	Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)			Dosage (mJ/cm²)			Flow (MLD)					
	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg	Min	Max	Total	Min	Max	Avg
1	69.1	78.7	73.5	65.2	81.0	74.2	80.0	87.3	83.6	62.0	78.6	71.2	71.1	79.7	75.5	66.1	79.9	73.9	--	--	--	--	--	--	95.9	96.3	96.1
2	68.8	77.2	73.1	65.4	83.4	76.5	79.2	87.1	83.3	61.6	81.8	73.4	71.7	79.6	75.4	64.5	82.3	76.1	--	--	--	--	--	--	95.9	96.4	96.2
3	65.7	75.7	70.8	65.6	89.0	78.3	73.5	87.6	80.2	62.1	85.5	75.3	67.9	77.4	72.8	64.8	86.6	78.1	--	--	--	--	--	--	96.2	97.8	96.5
4	64.5	73.9	69.5	68.4	89.7	80.6	74.6	83.2	79.1	66.2	87.9	77.5	67.8	75.7	71.7	69.2	88.9	80.5	--	--	--	--	--	--	96.0	96.3	96.1
5	64.3	77.6	68.5	65.1	85.1	77.0	72.9	84.4	77.1	63.5	82.5	73.9	67.4	78.6	70.8	65.8	84.1	76.8	--	--	--	--	--	--	95.2	96.2	95.6
6	62.9	74.9	68.8	62.9	86.3	74.5	72.3	83.5	77.6	60.6	81.5	71.6	65.4	76.9	71.1	63.6	85.2	74.3	--	--	--	--	--	--	95.3	95.8	95.6
7	62.1	76.4	68.3	55.7	83.4	71.1	70.2	87.6	77.4	54.2	78.9	68.0	63.5	81.8	71.2	55.7	81.5	70.5	--	--	--	--	--	--	95.1	95.9	95.3
8	57.6	68.8	62.4	68.1	87.5	76.9	65.5	77.7	70.8	64.3	83.4	73.8	59.3	69.6	64.4	68.6	84.8	76.7	--	--	--	--	--	--	94.9	95.9	95.2
9	59.6	69.4	64.7	63.1	85.8	76.6	66.6	78.7	73.3	60.3	83.0	73.5	61.6	72.4	67.1	63.0	83.7	76.1	--	--	--	--	--	--	95.0	95.7	95.3
10	66.8	77.8	71.4	64.5	81.0	73.7	75.2	89.4	81.5	62.0	77.9	70.7	68.9	80.4	73.8	65.7	79.3	73.4	--	--	--	--	--	--	94.7	95.9	95.5
11	60.1	92.6	69.1	66.4	83.3	75.6	62.1	83.7	73.6	64.1	114.4	73.7	66.9	74.6	71.3	67.6	107.1	76.5	--	--	--	--	--	--	95.7	95.9	95.8
12	55.5	65.1	59.8	70.0	90.5	81.3	56.6	67.0	61.5	66.8	89.2	78.1	61.1	71.7	65.6	69.6	90.2	81.1	--	--	--	--	--	--	95.5	95.9	95.6
13	60.4	69.8	64.6	68.4	87.7	77.8	62.0	70.4	65.3	65.5	83.2	74.6	65.1	74.9	69.8	68.3	85.7	77.4	--	--	--	--	--	--	95.6	96.1	95.8
14	60.3	69.1	63.6	68.0	86.3	77.5	60.5	69.9	64.0	64.8	84.3	74.3	64.7	73.3	69.1	67.8	85.5	77.2	--	--	--	--	--	--	95.5	95.8	95.6
15	59.9	69.5	63.5	66.3	85.9	77.7	59.6	69.1	64.3	65.6	81.9	74.3	63.6	74.0	67.8	67.2	84.4	77.2	--	--	--	--	--	--	95.2	95.8	95.5
16	57.6	83.0	65.4	66.2	125.5	78.1	59.0	78.3	64.2	63.6	119.3	74.8	50.2	67.4	58.8	69.3	91.9	77.0	--	--	--	--	--	--	95.4	95.9	95.6
17	59.6	69.7	64.2	56.4	80.7	73.1	60.5	69.9	64.5	54.1	78.1	70.6	48.7	56.4	51.9	64.2	89.5	81.6	--	--	--	--	--	--	95.0	95.9	95.4
18	58.1	129.0	65.6	62.4	116.8	68.8	53.8	219.6	62.5	22.6	117.8	72.4	47.0	80.2	59.8	68.8	118.8	83.8	--	--	--	--	--	--	95.0	95.4	95.2
19	55.7	67.0	59.9	58.4	84.7	74.7	50.5	59.8	54.5	56.9	83.3	71.9	56.5	69.8	61.7	62.6	89.1	79.3	--	--	--	--	--	--	95.0	95.4	95.2
20	53.0	65.8	57.3	62.2	89.2	79.3	47.0	59.1	52.2	59.3	88.5	76.6	53.4	69.2	59.0	66.0	94.6	84.4	--	--	--	--	--	--	95.0	95.3	95.2
21	52.9	60.0	56.2	70.1	89.3	80.9	48.3	54.4	51.1	67.0	86.5	78.2	55.4	64.0	58.5	76.1	94.9	86.2	--	--	--	--	--	--	92.1	95.5	93.9
22	54.3	65.0	58.4	60.6	89.2	79.8	49.0	60.2	53.6	60.2	86.4	76.9	56.6	66.5	60.1	68.1	93.2	85.0	--	--	--	--	--	--	94.9	95.7	95.5
23	57.1	68.0	62.6	71.2	89.2	81.4	51.4	62.5	57.4	68.7	86.1	78.3	60.1	71.8	65.6	76.3	93.3	86.4	--	--	--	--	--	--	91.9	96.1	94.9
24	64.3	69.7	67.0	69.6	91.6	36.6	59.7	63.8	61.8	66.6	85.4	35.2	54.6	74.8	64.7	74.0	94.4	38.8	--	--	--	--	--	--	96.0	96.2	96.0
25	57.7	79.2	65.6	53.7	93.4	76.5	54.4	76.7	62.9	52.6	92.4	74.2	50.8	72.6	58.5	58.3	99.7	81.7	--	--	--	--	--	--	95.7	96.9	96.1
26	56.1	64.6	59.6	72.7	92.9	84.1	53.1	63.3	56.8	69.7	90.7	81.7	49.2	58.0	53.1	77.8	98.3	89.8	--	--	--	--	--	--	95.5	95.9	95.7
27	51.0	66.6	57.4	58.9	94.9	83.0	48.8	62.2	55.0	55.4	94.7	80.2	45.4	60.9	51.9	59.4	102.3	88.0	--	--	--	--	--	--	95.3	95.6	95.4
28	50.5	64.1	55.7	63.7	89.3	80.1	48.1	61.0	52.7	61.8	88.4	77.7	50.4	91.3	56.4	67.1	95.9	85.5	--	--	--	--	--	--	95.1	95.6	95.2
29	44.4	94.6	59.6	68.8	93.5	82.6	47.5	86.1	67.4	67.1	91.2	80.1	44.8	89.7	69.0	73.7	99.4	88.0	--	--	--	--	--	--	94.5	95.3	94.9
30	47.8	61.2	53.6	66.8	93.2	80.2	45.2	93.5	61.9	64.9	91.2	77.9	46.0	93.3	56.6	72.2	100.2	85.5	--	--	--	--	--	--	93.8	95.1	94.5
Monthly Total						2,288.3						2,210.5						2,366.7						0.0			
Monthly Min/Max/ Avg	44.4	129.0	64.0	53.7	125.5		45.2	219.6	66.4	22.6	119.3		44.8	93.3	64.8	55.7	118.8		--	--	--	--	--		91.9	97.8	95.5

NOTES: ' -- ' indicates UV reactor offline

- Transmittance (%) is a grab sample of the combined filter effluent prior to the UV reactor

1.2.16 Log Removal

April 2024

Day	Rossdale									E.L. Smith								
	Log Removal									Log Removal								
	Giardia			Virus			*Cryptosporidium*			*Giardia*			Virus			*Cryptosporidium*		
	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	8.1	8.2	8.2	14	15	14	7.0	7.0	7.0	7.2	7.2	7.2	7.5	8.1	7.8	7.0	7.0	7.0
2	7.9	8.2	8.0	13	15	14	7.0	7.0	7.0	7.1	7.2	7.2	6.8	8.8	7.5	7.0	7.0	7.0
3	7.8	7.9	7.9	13	14	13	7.0	7.0	7.0	7.1	7.2	7.2	6.9	7.8	7.3	7.0	7.0	7.0
4	7.9	8.1	8.0	13	15	14	7.0	7.0	7.0	7.1	7.2	7.2	7.1	8.2	7.6	7.0	7.0	7.0
5	7.9	8.1	8.0	13	16	14	7.0	7.0	7.0	7.1	7.2	7.2	7.1	8.1	7.6	7.0	7.0	7.0
6	7.9	8.1	8.0	13	14	13	7.0	7.0	7.0	7.1	7.2	7.2	6.9	8.5	7.4	7.0	7.0	7.0
7	7.9	8.1	8.0	13	14	13	7.0	7.0	7.0	7.1	7.2	7.2	7.3	8.6	7.7	7.0	7.0	7.0
8	7.9	8.0	7.9	12	14	13	7.0	7.0	7.0	7.1	7.2	7.2	7.0	8.6	7.6	7.0	7.0	7.0
9	7.9	8.0	8.0	13	14	14	7.0	7.0	7.0	7.2	7.2	7.2	7.4	8.9	8.0	7.0	7.0	7.0
10	7.9	8.0	7.9	13	14	14	7.0	7.0	7.0	7.2	7.2	7.2	7.8	8.9	8.3	7.0	7.0	7.0
11	7.8	7.9	7.9	13	14	13	7.0	7.0	7.0	7.2	7.2	7.2	7.5	9.3	8.1	7.0	7.0	7.0
12	7.8	8.0	7.9	13	15	14	7.0	7.0	7.0	7.1	7.2	7.2	7.1	8.7	7.8	7.0	7.0	7.0
13	7.8	8.1	8.0	14	14	14	7.0	7.0	7.0	7.1	7.2	7.2	7.4	8.9	7.8	7.0	7.0	7.0
14	8.0	8.2	8.1	14	15	14	7.0	7.0	7.0	7.2	7.2	7.2	7.5	8.6	7.9	7.0	7.0	7.0
15	8.0	8.2	8.1	14	15	15	7.0	7.0	7.0	7.2	7.2	7.2	7.4	8.2	7.7	7.0	7.0	7.0
16	8.0	8.2	8.1	14	15	14	7.0	7.0	7.0	7.1	7.2	7.2	7.4	8.8	7.8	7.0	7.0	7.0
17	7.8	8.0	7.9	13	14	13	7.0	7.0	7.0	7.1	7.2	7.2	7.0	8.4	7.7	7.0	7.0	7.0
18	7.8	8.0	7.9	13	14	13	7.0	7.0	7.0	7.1	7.2	7.2	7.0	8.5	7.7	7.0	7.0	7.0
19	7.9	8.4	8.0	12	14	13	7.0	7.0	7.0	7.1	7.2	7.2	7.1	8.4	7.9	7.0	7.0	7.0
20	7.9	8.0	8.0	14	16	15	7.0	7.0	7.0	7.1	7.2	7.2	6.8	7.9	7.3	7.0	7.0	7.0
21	7.9	8.0	8.0	14	15	15	7.0	7.0	7.0	7.1	7.2	7.2	7.0	8.5	7.4	7.0	7.0	7.0
22	7.9	8.0	7.9	14	15	14	7.0	7.0	7.0	7.1	7.2	7.2	6.8	8.2	7.3	7.0	7.0	7.0
23	7.9	8.0	7.9	14	16	14	7.0	7.0	7.0	7.2	7.2	7.2	7.2	9.5	8.0	7.0	7.0	7.0
24	7.9	8.2	8.1	13	16	14	7.0	7.0	7.0	7.1	7.2	7.2	7.2	9.0	8.2	7.0	7.0	7.0
25	7.9	8.1	8.0	14	16	15	7.0	7.0	7.0	7.2	7.3	7.2	7.3	13	9.5	7.0	7.0	7.0
26	8.1	8.4	8.2	16	18	18	7.0	7.0	7.0	7.2	7.3	7.2	8.8	11	9.9	7.0	7.0	7.0
27	8.2	8.3	8.2	16	18	17	7.0	7.0	7.0	7.2	7.3	7.2	9.2	13	11	7.0	7.0	7.0
28	8.2	8.4	8.3	17	18	17	7.0	7.0	7.0	7.2	7.3	7.2	9.5	13	11	7.0	7.0	7.0
29	8.3	8.6	8.5	17	21	20	7.0	7.0	7.0	7.2	7.3	7.3	10.0	14	12	7.0	7.0	7.0
30	8.5	8.7	8.6	17	21	19	7.0	7.0	7.0	7.3	7.3	7.3	11	14	13	7.0	7.0	7.0
Monthly Min/Max/Avg	7.8	8.7	8.0	12	21	15	7.0	7.0	7.0	7.1	7.3	7.2	6.8	14	8.4	7.0	7.0	7.0

NOTES: ' -- ' indicates plant offline

1.2.17 Liquid Alum Chemical Consumption

April 2024

Day	Dosage (mg/L)			Consumption (kg)			
	Rossdale		E.L. Smith	Rossdale			E.L. Smith
	Plant 1	Plant 2		Plant 1	Plant 2	Plant Total	
1	33.7	33.7	31.8	4,174	6,958	11,132	16,469
2	32.0	32.0	30.5	3,959	7,381	11,339	16,179
3	31.9	31.9	29.4	3,944	7,888	11,831	15,906
4	32.9	32.8	35.3	4,065	7,134	11,198	19,749
5	35.2	35.3	41.0	4,359	7,690	12,049	22,071
6	36.1	36.1	46.5	4,461	7,756	12,217	23,947
7	39.9	39.9	54.2	4,940	8,233	13,173	27,681
8	44.9	44.9	51.4	5,550	9,242	14,791	27,621
9	41.6	41.6	46.4	5,148	8,577	13,725	24,786
10	39.1	39.1	41.5	4,838	8,059	12,897	21,497
11	34.0	34.0	38.8	4,207	7,893	12,101	20,533
12	34.3	34.3	41.8	4,249	8,499	12,748	23,467
13	37.0	37.0	42.1	4,574	8,073	12,647	22,760
14	34.7	34.7	36.8	4,294	7,156	11,451	19,785
15	33.1	33.1	33.7	4,099	6,832	10,931	18,110
16	32.5	32.5	33.5	4,015	6,691	10,706	17,996
17	32.4	32.4	34.8	3,794	7,557	11,351	18,684
18	32.5	32.5	33.0	3,669	7,865	11,534	17,750
19	31.0	30.9	33.1	3,324	6,357	9,681	18,057
20	30.0	30.0	35.3	3,403	7,733	11,136	20,105
21	30.1	30.1	39.1	3,414	7,759	11,173	22,623
22	32.1	32.2	39.4	3,643	8,287	11,930	22,800
23	40.3	40.3	44.2	4,569	10,381	14,950	25,630
24	67.2	67.2	56.8	7,620	17,328	24,948	16,495
25	38.8	38.7	42.7	4,396	9,964	14,360	24,962
26	27.2	27.2	38.1	3,087	7,017	10,103	23,571
27	28.8	28.8	39.0	3,261	7,410	10,670	23,538
28	28.1	28.1	31.2	3,187	7,242	10,429	18,133
29	25.3	25.4	26.7	3,589	6,543	10,132	16,179
30	26.3	26.4	33.2	3,335	6,460	9,795	19,268
Monthly Total				125,164	241,963	367,128	626,351
Monthly Avg	34.8	34.8	38.7	4,172	8,065	12,238	20,878

NOTES : ' -- ' indicates system offline
- Liquid alum consumption (kg) at 48.5% by weight (solution delivered to sites at a concentration of 48.5%)
- NSF limit for liquid alum is **194 mg/L**

1.2.18 Primary Polymer Chemical Consumption

April 2024

Day	Dosage (mg/L)			Consumption (kg)			
	Rossdale		E.L. Smith	Rossdale			E.L. Smith
	Plant 1	Plant 2		Plant 1	Plant 2	Plant Total	
1	0.35	0.35	0.17	21	35	56	43
2	0.32	0.30	0.16	19	34	53	41
3	0.30	0.30	0.16	18	36	54	42
4	0.30	0.30	0.16	18	32	50	43
5	0.27	0.27	0.16	16	28	45	42
6	0.25	0.25	0.16	15	26	41	40
7	0.25	0.25	0.17	15	25	40	43
8	0.25	0.25	0.17	15	25	40	43
9	0.25	0.25	0.16	15	25	40	41
10	0.25	0.25	0.16	15	25	40	40
11	0.25	0.25	0.16	15	28	43	41
12	0.25	0.25	0.17	15	30	45	47
13	0.25	0.25	0.18	15	26	41	46
14	0.25	0.25	0.17	15	25	40	45
15	0.25	0.25	0.16	15	25	40	43
16	0.25	0.25	0.17	15	25	40	44
17	0.25	0.25	0.16	14	28	42	41
18	0.25	0.25	0.17	14	29	43	44
19	0.25	0.25	0.16	13	25	38	43
20	0.25	0.25	0.14	14	31	45	38
21	0.26	0.26	0.13	14	32	46	36
22	0.30	0.30	0.14	17	38	54	38
23	0.30	0.30	0.17	17	38	54	48
24	0.30	0.30	0.21	17	38	54	29
25	0.30	0.30	0.20	17	38	54	56
26	0.30	0.30	0.17	17	38	54	51
27	0.29	0.30	0.18	16	38	53	53
28	0.25	0.27	0.17	14	34	47	48
29	0.25	0.25	0.16	17	31	48	47
30	0.28	0.29	0.19	17	34	51	53
Monthly Total				473	919	1,392	1,306
Monthly Avg	0.27	0.27	0.17	16	31	46	44

NOTES: ' -- ' indicates system offline or primary polymer not being used
- Primary polymer consumption (kg) at 100% by weight mixed at the sites to required solution
- NSF limit for Praestol DW 27AG is **1.00 mg/L**

1.2.19 Carbon Chemical Consumption

April 2024

Day	Dosage (mg/L)			Consumption (kg)			
	Rossdale		E.L. Smith	Rossdale			E.L. Smith
	Plant 1	Plant 2		Plant 1	Plant 2	Plant Total	
1	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--
28	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--
Monthly Total				--	--	--	--
Monthly Avg	--	--	--	--	--	--	--

NOTES: ' -- ' indicates carbon not being used
- Carbon consumption (kg) at 100% by weight (mixed at the sites)
- NSF limit for Carbon is **250 mg/L**

1.2.20 Sodium Hypochlorite Chemical Consumption

April 2024

Day	Rossdale					E.L. Smith	
	Dosage (mg/L)		Consumption (kg)			Dosage (mg/L)	Consumption (kg)
	Plant 1	Plant 2	Plant 1	Plant 2	Plant Total		
1	2.82	2.72	21,147	33,943	58,682	3.04	100,250
2	2.74	2.74	20,564	38,357	62,320	3.06	103,534
3	2.70	2.70	20,231	40,493	63,845	3.16	109,309
4	2.74	2.70	20,517	35,588	59,223	3.18	113,524
5	2.68	2.61	20,112	34,547	56,626	3.19	109,704
6	2.67	2.66	20,002	34,676	59,195	3.26	107,197
7	2.65	2.64	19,875	32,990	56,280	3.43	111,690
8	2.59	2.57	19,403	32,066	54,119	3.49	119,548
9	2.58	2.51	19,346	31,380	53,048	3.37	114,732
10	2.63	2.56	19,755	31,934	55,455	3.27	107,942
11	2.67	2.68	20,057	37,709	61,786	3.15	106,286
12	2.59	2.59	19,434	38,812	61,456	3.16	113,243
13	2.57	2.56	19,259	33,886	56,739	3.19	110,052
14	2.57	2.56	19,248	32,002	54,148	3.21	109,988
15	2.54	2.53	19,047	31,657	54,512	3.31	113,707
16	2.50	2.50	18,736	31,259	53,530	3.26	111,636
17	2.57	2.60	18,226	36,677	58,293	3.23	110,779
18	2.67	2.68	18,247	39,300	60,186	3.22	110,257
19	2.66	2.65	17,325	33,002	52,374	3.08	107,172
20	2.70	2.69	18,530	42,086	63,463	3.02	109,879
21	2.65	2.65	18,217	41,413	61,867	2.94	108,561
22	2.62	2.62	17,986	40,890	61,610	3.03	112,009
23	2.65	2.65	18,220	41,406	65,379	3.07	113,421
24	2.57	2.57	17,645	40,115	61,340	2.94	54,449
25	2.48	2.48	17,045	38,711	59,723	2.80	104,495
26	2.70	2.70	18,563	42,187	65,609	2.88	113,711
27	2.72	2.72	18,682	42,447	65,337	3.07	118,184
28	2.67	2.67	18,376	41,705	66,148	3.14	116,615
29	2.72	2.73	23,448	42,585	72,479	3.39	131,019
30	2.85	2.83	21,956	41,992	69,157	3.38	125,149
Monthly Total			579,197	1,115,815	1,803,928		3,298,042
Monthly Avg	2.65	2.63	19,307	37,194	60,131	3.16	109,935

NOTES: ' -- ' indicates system offline

- Sodium hypochlorite consumption (kg) at 0.8% by weight (sodium hypochlorite generated onsite at a concentration of 0.8%)
- Plant Total Consumption is the combined addition of Plant 1, Plant 2 and Post Filter Trim.
- NSF limit for Sodium Hypochlorite generated onsite is **10 mg/L**

1.2.21 Filter Polymer Chemical Consumption

April 2024

Day	Dosage (mg/L)		Consumption (kg)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	0.10	0.14	14	35
2	0.10	0.13	15	32
3	0.10	0.13	16	33
4	0.10	0.12	15	32
5	0.10	0.12	15	31
6	0.10	0.14	15	34
7	0.10	0.14	14	35
8	0.10	0.18	14	46
9	0.10	0.18	14	46
10	0.10	0.15	14	37
11	0.10	0.13	16	34
12	0.10	0.14	16	37
13	0.10	0.15	15	38
14	0.10	0.13	14	35
15	0.10	0.13	14	34
16	0.10	0.13	14	35
17	0.10	0.16	15	41
18	0.10	0.15	15	40
19	0.10	0.15	13	41
20	0.10	0.15	17	40
21	0.10	0.14	17	39
22	0.11	0.16	18	44
23	0.15	0.19	25	52
24	0.15	0.19	25	27
25	0.15	0.17	25	48
26	0.15	0.18	25	55
27	0.17	0.20	30	57
28	0.19	0.21	33	60
29	0.19	0.21	36	63
30	0.19	0.24	33	68
Monthly Total			562	1,248
Monthly Avg	0.12	0.16	19	42

NOTES: ' -- ' indicates system offline

- Filter polymer consumption (kg) at 100% by weight mixed at the sites to required solution
- NSF limit for Magnafloc LT 7981 is **20 mg/L**
- NSF limit for Magnafloc LT 7995 is **25 mg/L**

1.2.22 Aqua Ammonia Chemical Consumption

April 2024

Day	Dosage (mg/L)		Consumption (kg)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	0.62	--	477	--
2	0.62	--	514	--
3	0.62	--	542	--
4	0.62	--	492	--
5	0.62	--	496	--
6	0.62	--	494	--
7	0.62	--	481	--
8	0.62	--	467	--
9	0.62	--	477	--
10	0.61	--	475	--
11	0.61	--	516	--
12	0.61	--	534	--
13	0.61	--	489	--
14	0.61	--	472	--
15	0.61	--	473	--
16	0.61	--	471	--
17	0.61	--	501	--
18	0.61	--	510	--
19	0.61	--	439	--
20	0.61	--	551	--
21	0.61	--	549	--
22	0.61	--	555	--
23	0.61	--	549	--
24	0.61	--	552	--
25	0.61	--	552	--
26	0.61	--	551	--
27	0.61	--	557	--
28	0.61	--	550	--
29	0.61	--	604	--
30	0.61	--	547	--
Monthly Total			15,436	--
Monthly Avg	0.61	--	515	--

NOTES: ' -- ' indicates system offline
- Aqua ammonia consumption (kg) at 100% by weight (solution delivered to sites at a concentration of 19.0%)
- NSF limit for Aqua Ammonia is **2.85 mg/L**

1.2.22-1 LAS Ammonia Chemical Consumption

April 2024

Day	Dosage (mg/L)	Consumption (kg)
	E.L. Smith	E.L. Smith
1	0.58	1,305
2	0.58	1,344
3	0.58	1,380
4	0.58	1,418
5	0.58	1,354
6	0.58	1,312
7	0.58	1,246
8	0.58	1,351
9	0.58	1,346
10	0.58	1,296
11	0.58	1,342
12	0.58	1,430
13	0.58	1,365
14	0.58	1,364
15	0.58	1,362
16	0.58	1,368
17	0.58	1,342
18	0.59	1,343
19	0.59	1,348
20	0.58	1,433
21	0.58	1,462
22	0.58	1,439
23	0.58	1,465
24	0.58	655
25	0.58	1,384
26	0.58	1,520
27	0.58	1,494
28	0.58	1,446
29	0.58	1,493
30	0.58	1,450
Monthly Total		40,856
Monthly Avg	0.58	1,362

NOTES: ' -- ' indicates system offline
- LAS ammonia consumption (kg) at 100% by weight (solution delivered to sites at a concentration of **41.0%**)
- NSF limit for LAS Ammonia is **16.4 mg/L**

1.2.23 Caustic Soda Chemical Consumption

April 2024

Day	Dosage (mg/L)		Consumption (kg)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	6.14	8.01	1,608	3,511
2	5.73	7.92	1,637	3,578
3	5.04	7.18	1,551	3,326
4	5.00	7.13	1,383	3,401
5	5.30	7.21	1,476	3,281
6	5.60	8.96	1,554	3,950
7	6.59	12.6	1,768	5,288
8	7.61	13.1	1,976	5,955
9	8.67	11.0	2,297	4,957
10	7.92	9.41	2,112	4,100
11	7.45	8.43	2,131	3,806
12	6.55	9.12	1,977	4,388
13	6.27	10.2	1,703	4,710
14	6.18	8.78	1,620	4,019
15	5.67	7.72	1,482	3,536
16	5.57	7.39	1,465	3,395
17	5.60	7.64	1,561	3,442
18	5.48	7.32	1,588	3,293
19	5.16	6.94	1,282	3,135
20	5.21	7.49	1,628	3,600
21	5.29	7.85	1,656	3,850
22	4.21	8.39	1,330	4,055
23	5.90	8.98	1,877	4,418
24	10.0	11.4	3,154	2,520
25	8.45	9.79	2,600	4,551
26	3.35	7.84	1,064	4,007
27	2.90	7.67	925	3,855
28	3.09	5.82	973	2,831
29	2.45	3.93	846	1,970
30	2.17	4.79	682	2,332
Monthly Total			48,905	113,058
Monthly Avg	5.69	8.33	1,630	3,769

NOTES: ' -- ' indicates system offline
- Caustic soda consumption (kg) at 100% by weight (solution delivered to sites at a concentration of 50.0%)
- NSF limit for Caustic Soda is **50 mg/L**

1.2.24 Fluoride Chemical Consumption
April 2024

Day	Dosage (mg/L)		Consumption (kg)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	0.61	0.60	407	606
2	0.62	0.60	448	624
3	0.61	0.60	468	640
4	0.61	0.60	422	659
5	0.61	0.60	425	629
6	0.61	0.60	423	610
7	0.61	0.61	412	588
8	0.61	0.61	400	639
9	0.62	0.61	413	636
10	0.62	0.61	418	612
11	0.62	0.61	457	634
12	0.62	0.61	473	675
13	0.62	0.61	434	646
14	0.62	0.61	418	643
15	0.62	0.61	419	641
16	0.62	0.61	417	645
17	0.62	0.63	444	654
18	0.62	0.65	452	669
19	0.62	0.64	388	665
20	0.62	0.64	488	706
21	0.62	0.64	487	721
22	0.62	0.64	491	710
23	0.62	0.64	488	723
24	0.63	0.64	497	326
25	0.64	0.65	508	695
26	0.65	0.66	513	774
27	0.65	0.66	518	761
28	0.64	0.66	506	737
29	0.63	0.66	547	759
30	0.63	0.66	492	738
Monthly Total			13,673	19,765
Monthly Avg	0.62	0.63	456	659

NOTES: ' -- ' indicates system offline
- Fluoride consumption (kg) at 100% by weight (solution delivered to sites at a concentration of 21.8%)
- NSF limit for Fluoride is **1.308 mg/L**

1.2.25 Sodium Bisulfite (SBS) Chemical Consumption

April 2024

Day	Dosage (mg/L)		Consumption (kg)		De-chlorinated Waste Stream to Outfall (ML)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	11.2	17.3	522	1,859	18	41
2	14.2	16.0	853	1,783	23	42
3	18.4	15.3	874	1,668	18	42
4	18.3	14.4	1,053	1,700	22	45
5	9.91	14.4	461	1,689	18	44
6	10.9	13.3	492	1,422	17	41
7	15.9	12.4	849	1,526	20	47
8	13.4	12.3	711	1,434	20	44
9	12.0	12.0	566	1,458	18	46
10	20.9	10.6	958	1,283	17	43
11	11.2	15.1	519	1,583	18	40
12	15.1	19.9	730	2,251	18	43
13	11.2	17.9	521	2,082	18	44
14	9.47	17.1	417	1,934	17	43
15	11.4	16.4	547	1,891	18	44
16	11.3	15.7	521	1,668	18	40
17	8.39	14.4	389	1,810	18	47
18	11.5	12.7	520	1,650	17	50
19	25.1	10.9	1,961	1,520	30	53
20	13.4	11.2	389	1,554	11	53
21	15.5	10.6	520	1,377	13	49
22	13.6	11.1	491	1,569	14	51
23	13.8	11.8	479	1,449	13	47
24	15.3	19.0	472	2,035	12	47
25	12.7	9.80	453	1,726	14	61
26	13.2	14.2	458	2,079	13	54
27	16.9	17.3	465	2,324	11	54
28	15.0	17.3	594	2,483	15	54
29	15.9	19.5	457	2,404	11	59
30	28.0	15.2	1,807	2,129	25	54
Monthly Total			20,050	53,339	516	1,422
Monthly Avg	14.4	14.5	668	1,778	17	47

NOTES: ' -- ' indicates plant offline

- Sodium bisulfite consumption (kg) at 38% by weight (solution delivered to sites at a concentration of 38.0%)

1.2.26 Rossdale Waste Stream Data

April 2024

		Clarifier Blowdown	Clarifier Washdown *	Backwash Water	Filter To Waste	Bypass	Total	De-Chlorin'd Waste Stream 3			De-Chlorin'd Waste Stream 7		
Volume (ML)		369	0.0	118	30	5.4	523	58.20			457.44		
Solids (kg)	TSS	331,668	0	4,258			335,926						
	Aluminium	16,098	0	1,474			17,572						
# of Bypasses						1		Min	Max	Avg	Min	Max	Avg
pH								6.2	7.9	7.4	6.4	8.0	7.7
Total Chlorine (mg/L)								0.00	1.92	0.00	0.00	0.00	0.00
Sulfite (mg/L)								0.00	20.0	8.70	0.31	20.0	5.66

NOTES: * Estimate value for the waste stream volume and calculated value for the waste stream solids
- Clarifier washdown volume(s) estimated for clarifier cleaning
- LLP flush, HLP cooling are not applicable to the Rossdale WTP

1.2.27 E.L. Smith Waste Stream Data

April 2024

		Clarifier Blowdown	Clarifier Washdown *	Backwash Water	Filter To Waste	Bypass	LLP Flush	HLP Cooling	Total	De-chlorinated Waste flow to		
Volume (ML)		652	10	353	298	34	0.7	23	1,371	1,422		
Solids (kg)	TSS	395,290	427	33,492					429,209			
	Aluminium	27,016	28	11,593					38,637			
# of Bypasses						1				Min	Max	Avg
pH										6.83	7.58	7.28
Total Chlorine (mg/L)										0.00	0.00	0.00
Sulphite (mg/L)										0.11	20.0	6.62

NOTES: * Estimate value for the waste stream volume and calculated value for the waste stream solids
- Clarifier washdown volume(s) estimated for clarifer cleaning
- Estimated chlorinated waste stream to outfall for dechlorination

1.2.28 Demand/Production Statistics

April 2024

Month	ROSSDALE ZONE			E.L.SMITH ZONE			SYSTEM TOTAL			RESERVOIR PUMPAGE		
	Monthly Prod'n (ML)	Max Daily Prod'n (ML)	Peak Daily Demand (ML)	Monthly Prod'n (ML)	Max Daily Prod'n (ML)	Peak Daily Demand (ML)	Monthly Prod'n (ML)	Max Daily Prod'n (ML)	Peak Daily Demand (ML)	Rossdale Zone (ML)	E.L.Smith Zone (ML)	Total (ML)
JANUARY	4,226	179	222	6,762	253	249	10,989	395	379	1,451	2,466	3,917
FEBRUARY	3,750	165	183	6,828	278	301	10,578	433	371	1,507	2,211	3,718
MARCH	4,282	163	189	7,099	269	260	11,382	405	378	1,523	2,511	4,034
APRIL	4,610	183	212	6,550	246	232	11,159	419	389	1,250	2,653	3,902

2024 - HIGH 5-DAY DEMAND

	PLANTS PROD (ML/d)	RES. GAIN / LOSS (%)	RES. GAIN / LOSS (ML)	TOTAL DEMAND (ML)
22-Apr-2024	397	3.1	19.6	378
23-Apr-2024	403	2.5	15.9	387
24-Apr-2024	261	-20.1	-126.4	387
25-Apr-2024	390	0.2	1.3	389
26-Apr-2024	412	5.7	35.7	376
			AVERAGE:	383

Year to Date Data	2024	2023	% CHANGE
TOTAL PRODUCTION TO DATE (ML)	44,107	43,273	1.9
AVG. DAILY DEMAND TO DATE (ML)	364	361	0.8
PEAK DAILY DEMAND TO DATE (ML)	389	419	(7.2)
PEAK HOURLY DEMAND TO DATE (ML)	503	536	(6.2)
HIGH 5-DAY AVERAGE TO DATE (ML)	383	404	(5.0)

Peak daily demand of 389 ML/d occurred on April 25, 2024

Peak hourly demand of 503 ML/d occurred on March 16, 2024 at 11:00-12:00

1.2.29 Reservoir Chlorine Residual (mg/L) - Part 1

April 2024

Reservoir	Papaschase 1			Ormsby			Clareview Discharge			Millwoods Discharge			Kaskitayo			Discovery Park		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1	1.60	1.81	1.63	1.75	1.88	1.78	1.57	1.68	1.64	1.81	1.90	1.83	1.60	1.79	1.74	1.40	1.48	1.45
2	1.49	1.80	1.60	1.65	1.83	1.78	1.62	1.67	1.65	1.83	1.91	1.84	1.72	1.77	1.75	1.25	1.51	1.45
3	1.62	1.87	1.63	1.72	1.87	1.82	1.61	1.75	1.68	1.83	1.92	1.85	1.72	1.82	1.78	1.34	1.50	1.42
4	1.62	1.80	1.63	1.71	1.93	1.83	1.64	1.70	1.69	1.82	1.93	1.85	1.67	1.84	1.78	1.28	1.45	1.38
5	1.58	1.83	1.62	1.80	2.00	1.84	1.64	1.69	1.67	1.84	1.90	1.86	1.76	1.81	1.78	1.24	1.42	1.36
6	1.62	1.83	1.63	1.71	1.91	1.82	1.57	1.69	1.63	1.83	1.89	1.84	1.65	1.83	1.77	1.18	1.41	1.36
7	1.50	1.91	1.61	1.79	1.90	1.81	1.61	1.73	1.64	1.81	1.92	1.83	1.64	1.81	1.75	1.26	1.41	1.38
8	1.59	1.88	1.61	1.79	1.92	1.81	1.61	1.69	1.66	1.81	1.92	1.84	1.72	1.78	1.75	1.33	1.41	1.38
9	1.61	1.80	1.64	1.78	1.92	1.81	1.63	1.67	1.65	1.81	1.90	1.84	1.74	1.83	1.76	1.32	1.47	1.40
10	1.57	1.78	1.61	1.71	1.92	1.81	1.54	1.71	1.64	1.81	1.89	1.83	1.62	1.80	1.75	1.39	1.48	1.45
11	1.60	1.81	1.62	1.75	1.90	1.82	1.61	1.65	1.64	1.82	1.90	1.84	1.67	1.87	1.80	1.35	1.48	1.43
12	1.63	1.86	1.65	1.71	1.91	1.84	1.59	1.68	1.65	1.85	2.01	1.86	1.67	1.86	1.80	1.36	1.44	1.41
13	1.54	1.86	1.64	1.73	1.93	1.84	1.62	1.70	1.67	1.86	1.95	1.88	1.65	1.86	1.79	1.27	1.44	1.40
14	1.63	1.86	1.65	1.81	1.90	1.83	1.56	1.72	1.67	1.85	1.92	1.87	1.67	1.84	1.78	1.24	1.41	1.37
15	1.62	1.86	1.65	1.72	1.93	1.83	1.55	1.72	1.66	1.86	1.94	1.86	1.76	1.81	1.78	1.31	1.37	1.34
16	1.48	1.70	1.63	1.80	1.92	1.83	1.61	1.66	1.64	1.85	1.94	1.86	1.68	1.83	1.79	1.19	1.48	1.40
17	1.60	1.84	1.63	1.71	1.93	1.83	1.62	1.65	1.64	1.85	1.94	1.88	1.66	1.85	1.78	1.25	1.48	1.45
18	1.58	1.81	1.64	1.80	1.88	1.82	1.58	1.70	1.65	1.86	1.93	1.87	1.76	1.80	1.78	1.34	1.47	1.43
19	1.61	1.81	1.63	1.69	1.93	1.81	1.61	1.65	1.64	1.83	1.91	1.86	1.78	2.03	1.79	1.22	1.46	1.42
20	1.62	1.62	1.62	1.71	1.91	1.83	1.48	1.68	1.63	1.86	1.94	1.88	1.78	1.83	1.80	1.22	1.45	1.40
21	1.65	1.87	1.68	1.81	1.90	1.85	1.59	1.67	1.64	1.86	1.95	1.89	1.63	1.87	1.80	1.18	1.42	1.37
22	1.65	1.85	1.68	1.76	1.93	1.86	1.64	1.72	1.67	1.87	1.95	1.89	1.66	1.86	1.79	1.33	1.38	1.36
23	1.62	1.82	1.63	1.84	1.93	1.86	1.66	1.70	1.68	1.86	1.92	1.89	1.74	1.86	1.82	1.08	1.45	1.37
24	1.57	1.59	1.59	1.83	2.02	1.86	1.50	1.71	1.66	1.86	1.95	1.88	1.75	1.91	1.86	1.19	1.45	1.41
25	1.45	1.65	1.57	1.86	1.96	1.91	1.62	1.67	1.65	1.85	1.93	1.88	1.75	1.91	1.86	1.07	1.48	1.39
26	--	--	--	1.90	1.99	1.92	1.52	1.80	1.65	1.89	1.97	1.91	1.85	1.97	1.87	1.08	1.42	1.38
27	1.62	1.91	1.64	1.82	2.03	1.94	1.63	1.71	1.69	1.89	2.01	1.92	1.75	1.93	1.87	1.06	1.40	1.35
28	1.60	1.73	1.61	1.75	2.00	1.92	1.53	1.75	1.69	1.88	1.98	1.90	1.77	1.90	1.87	1.08	1.37	1.33
29	--	--	--	1.84	1.95	1.90	1.60	1.75	1.68	1.89	1.98	1.92	1.76	1.94	1.87	1.07	1.34	1.31
30	1.62	1.83	1.71	1.75	1.96	1.89	1.65	1.79	1.69	1.88	1.97	1.90	1.74	1.91	1.83	1.01	1.44	1.35
Monthly Min/Max/Avg	1.45	1.91	1.63	1.65	2.03	1.84	1.48	1.80	1.66	1.81	2.01	1.87	1.60	2.03	1.80	1.01	1.51	1.39

NOTES: '--' Indication Analyzer Offline

1.2.30 Reservoir Chlorine Residual (mg/L) - Part 2

April 2024

Reservoir	Rosslyn 1			Londonderry			N. Jasper Place			Rosslyn 2			Thorncliffe			Blackmud Creek		
Day	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
1				1.57	1.87	1.68	1.45	1.55	1.52	1.70	1.94	1.71	1.59	1.88	1.60	1.40	1.50	1.45
2				1.55	1.80	1.66	1.47	1.54	1.51	1.60	1.78	1.71	1.55	1.88	1.57	1.41	1.80	1.61
3				1.57	1.76	1.68	1.53	1.83	1.54	1.69	1.71	1.70				1.57	1.71	1.63
4				1.57	1.77	1.69	1.54	1.84	1.55	1.68	2.05	1.70	1.59	1.89	1.61	1.54	1.67	1.61
5	--	--	--	1.55	1.84	1.69	1.54	1.84	1.56	1.60	1.76	1.71	1.62	1.90	1.63	1.54	1.65	1.59
6	--	--	--	1.58	1.82	1.70	1.53	1.81	1.56	1.73	2.06	1.74	1.53	1.88	1.64	1.53	1.64	1.59
7	--	--	--	1.58	1.79	1.70	1.41	1.78	1.56	1.59	2.18	1.75	1.53	1.87	1.62	1.54	1.65	1.60
8	1.71	1.72	1.71	1.55	1.81	1.71	1.49	1.75	1.55	1.66	1.77	1.73	1.58	1.91	1.59	1.55	1.67	1.61
9	--	--	--	1.64	1.79	1.72	1.53	1.84	1.55	1.66	1.73	1.72	1.57	1.92	1.60	1.57	1.69	1.63
10	--	--	--	1.53	1.76	1.70	1.47	1.82	1.54	1.70	2.03	1.71	1.56	1.93	1.60	1.58	1.68	1.63
11	--	--	--	1.55	1.77	1.68	1.52	1.83	1.55	1.69	1.72	1.71	1.51	1.93	1.60	1.58	1.67	1.63
12	--	--	--	1.51	1.77	1.69	1.56	1.84	1.58	1.62	1.75	1.71	1.61	1.94	1.63	1.58	1.68	1.63
13	--	--	--	1.55	1.79	1.67	1.56	1.87	1.59	1.62	1.79	1.72	1.63	1.92	1.66	1.57	1.68	1.63
14	--	--	--	1.58	1.84	1.68	1.55	1.78	1.58	1.61	1.80	1.72	1.65	1.92	1.66	1.55	1.67	1.61
15	1.72	1.72	1.72	1.54	1.77	1.68	1.54	1.82	1.57	1.64	1.79	1.73	1.62	1.95	1.63	1.54	1.67	1.60
16	--	--	--	1.56	1.83	1.67	1.54	1.85	1.57	1.72	1.75	1.73	1.62	1.95	1.65	1.52	1.67	1.59
17	--	--	--	1.60	1.73	1.66	1.56	1.84	1.58	1.71	1.74	1.72	1.62	1.92	1.65	1.52	1.63	1.58
18	--	--	--	1.56	1.77	1.68	1.51	1.82	1.59	1.66	1.73	1.71	1.63	1.92	1.65	1.51	1.63	1.57
19	--	--	--	1.56	1.79	1.65	1.56	1.82	1.57	1.70	1.72	1.71	1.61	1.96	1.62	1.51	1.61	1.56
20	--	--	--	1.54	1.79	1.67	1.55	1.85	1.57	1.72	2.09	1.75	1.64	1.92	1.65	1.53	1.63	1.58
21				1.49	1.81	1.69	1.51	1.83	1.60	1.68	1.80	1.74	1.58	1.95	1.68	1.53	1.62	1.57
22	1.71	1.73	1.72	1.63	1.85	1.71	1.49	1.85	1.58	1.73	1.75	1.74				1.53	1.62	1.57
23				1.59	1.80	1.71				1.75	2.05	1.76	1.66	1.96	1.69	1.53	1.62	1.57
24				1.58	1.82	1.69	1.51	1.85	1.54	1.74	2.06	1.76	1.63	2.00	1.65	1.54	1.63	1.59
25	--	--	--	1.52	1.79	1.69	1.56	1.77	1.58	1.63	1.80	1.74	1.52	1.99	1.65	1.55	1.62	1.59
26	--	--	--	1.68	1.86	1.74	1.57	1.89	1.59	1.71	1.92	1.75	1.63	1.99	1.65	1.56	1.63	1.60
27	--	--	--	1.63	1.83	1.74	1.59	1.89	1.61	--	--	--	--	--	--	1.55	1.64	1.60
28	--	--	--	1.61	1.79	1.72	1.57	1.87	1.59	1.75	2.09	1.78	1.70	2.02	1.72	1.55	1.63	1.60
29	--	--	--	1.54	1.77	1.70	1.50	1.89	1.59	1.75	2.07	1.77	1.69	2.03	1.70	1.56	1.64	1.60
30	1.68	1.69	1.68	1.62	1.76	1.70	1.59	1.86	1.61	1.75	2.10	1.76	1.70	1.96	1.72	1.56	1.64	1.60
Monthly Min/Max/Avg	1.68	1.73	1.71	1.49	1.87	1.69	1.41	1.89	1.57	1.59	2.18	1.73	1.51	2.03	1.64	1.40	1.80	1.59

NOTES: '--' Indication Analyzer Offline

1.2.31 Phosphoric Acid Consumption

April 2024

Day	Dosage (mg/L)		Consumption (kg)	
	Rossdale	E.L. Smith	Rossdale	E.L. Smith
1	0.90	0.90	567	789
2	0.90	0.90	493	833
3	0.90	0.90	632	882
4	0.90	0.90	553	831
5	0.90	0.90	558	839
6	0.90	0.90	542	841
7	0.90	0.90	540	785
8	0.90	0.90	543	789
9	0.90	0.90	542	788
10	0.90	0.90	554	788
11	0.90	0.90	538	831
12	0.90	0.90	704	887
13	0.90	0.90	521	832
14	0.90	0.90	553	851
15	0.90	0.84	503	742
16	0.90	0.88	552	831
17	0.90	0.90	571	827
18	0.90	0.90	601	807
19	0.90	0.90	490	801
20	0.90	0.90	625	852
21	0.90	0.90	640	879
22	0.90	0.90	627	896
23	0.90	0.90	607	919
24	0.90	0.90	702	361
25	0.90	0.90	590	844
26	0.90	0.90	623	896
27	0.90	0.90	642	946
28	0.90	0.90	623	858
29	0.90	0.90	696	876
30	0.90	0.90	625	838
Monthly Total			17,560	24,740
Monthly Avg	0.90	0.90	585	825

NOTES: ' -- ' indicates plant offline
- Phosphoric acid consumption (kg) at 100% by weight (solution delivered to sites at a concentration of 75%)
- NSF limit for Phosphoric acid (75%) is 13 mg/l

1.2.32 Summary of Mainbreaks

April 2024

Date and Time Reported	Location of Mainbreak	Repaired (Time)	Size	Type**
04/02/2024 10:57:05	11906-104 STREET NW	04/02/2024 19:37:00	150	CI
04/02/2024 23:55:57	10190-104 STREET NW	04/05/2024 00:00:00	150	CI
04/04/2024 15:09:44	10190-104 STREET NW	04/04/2024 17:00:00	150	CI
04/06/2024 04:42:47	11420-50 AVENUE NW	04/06/2024 15:41:10	200	CI
04/06/2024 15:39:00	11420-50 AVENUE NW	04/06/2024 21:07:45	200	CI
04/07/2024 09:09:10	13628-139 STREET NW	04/07/2024 18:30:51	200	CI
04/10/2024 07:23:00	10002-147 STREET NW	04/10/2024 23:00:00	150	CI
04/10/2024 23:29:14	10002-147 STREET NW	04/10/2024 23:36:00	150	CI
04/10/2024 23:44:09	10002-147 STREET NW	04/11/2024 12:21:11	150	CI
04/11/2024 14:11:50	10507-136 STREET NW	04/11/2024 17:21:37	150	CI
04/12/2024 04:38:08	140 ST 103 AVE	04/12/2024 15:53:45	150	CI
04/17/2024 17:15:06	16175-110B AVENUE NW	04/18/2024 14:08:00	250	CI
04/24/2024 04:27:24	8503-64 STREET NW	04/24/2024 15:45:57	150	CI
04/24/2024 06:58:01	6020-104 STREET NW		150	PVC
04/24/2024 15:40:00	8503-64 STREET NW	04/24/2024 16:35:00	150	CI
04/25/2024 13:54:41	8507-64 STREET NW	04/25/2024 20:05:00	150	CI
04/28/2024 10:13:18	13404-111 STREET NW	04/28/2024 19:22:50	150	CI
04/28/2024 19:22:07	13404-111 STREET NW	04/28/2024 20:09:00	150	CI

Month	Total Breaks By Month
Jan-24	36
Feb-24	28
Mar-24	13
Apr-24	18
May-24	
Jun-24	
Jul-24	
Aug-24	
Sep-24	
Oct-24	
Nov-24	
Dec-24	
YTD 2024	**95**

**Pipe Type Explanation	
CI	Cast Iron Pipe
COP	Copper Pipe
CCP	Concrete Cylinder Pipe
PVC	Poly Vinyl Chloride Pipe
AC	Asbestos Cement Pipe
HPLCP	Hyperscon Cylinder Prestressed Lined Concrete Cylinder Pipe
FRP	Fibre Glass Pipe
STL	Steel Pipe
HDP	High Density Polyethylene

Water Quality 2024

2.1.1 Water Quality Objectives for EPCOR

Parameter	Approval Requirement	EPCOR Internal Limit	EPCOR Target
Turbidity (NTU)			
Individual Filters	<0.3	<0.1 (2)	<0.08
Distribution System	N/A	< 1 (1)	< 1
Distribution System (Maintenance)	N/A	< 3 (1)	< 1
Colour (TCU)	<15 (3)	<10 (1)	<3
pH (25°C)	6.5 - 8.5	7.3 - 8.3 (1)	7.4 - 8.0
Taste and Odour	Inoffensive (3)	Inoffensive (1)	Inoffensive
E.coli (PA/100 mL)	absent	absent (1)	absent
Total Coliforms (PA/100 mL)	absent	absent (1)	absent
Total Chlorine Residual (mg/L)			
Water Treatment Plant Effluent	>1.0	1.3 - 2.4 (2)	1.9 - 2.2
Reservoirs	>0.5	1.0 - 2.4 (1)	1.2 - 2.2
Distribution	>0.5 (4)	1.0 - 2.4 (1)	1.0 - 2.2
Fluoride: (mg/L)			
Reservoir Effluent	0.5 - 0.9	0.6 - 0.8 (1)	0.6 - 0.8
Trihalomethanes (mg/L)			
Reservoir Effluent	<0.100	<0.050 (1)	<0.040
Distribution System	<0.100	<0.050 (1)	<0.040
UV254 % Transmittance			
E.L. Smith		>89% (2)	>90%
Rossdale		>87% (2)	>88%
HAA (mg/L)			
Reservoir Effluent	< 0.080	< 0.040 (1)	<0.035
Distribution System	< 0.080	< 0.040 (1)	<0.035
NDMA (mg/L):			
Reservoir Effluent	< 0.000040	< 0.000010 (1)	<0.000005
Distribution System	< 0.000040	< 0.000010 (1)	
Microoganism Log Removal at Water			
Giardia	≥5.5	≥6.0 (2)	>6.5
Cryptosporidium	≥5.5	≥5.3 (2)	>6.0
Virus	≥4.0	≥4.5 (2)	>5.0

(1) Limit based on City of Edmonton Performance Based Rate (PBR) agreement
(2) Limit based on EPCOR Action Level
(3) Aesthetic Objective
(4) in 75% of samples collected in a day
All values are expressed in units of mg/L unless otherwise stated.
Based on March 2024 Summary of Epcor Edmonton Water Quality Standards.

2.1.2 SUMMARY OF MAJOR CHEMICALS, MICROBIOLOGICAL, AND PHYSICAL PARAMETERS OF EDMONTON DRINKING WATER PRODUCED AT WATER TREATMENT PLANTS

April 2024

Parameter	Unit	Monthly Count	Monthly Average	YTD Median	YTD Min	YTD Max	YTD Count
Alkalinity Total	mg CaCO3/L	60	108	122	8	141	240
Aluminum	mg/L	2	0.026	0.028	0.023	0.089	8
Arsenic	mg/L	2	<0.0002	<0.0002	<0.0002	<0.0002	8
Bromate Dissolved	mg/L	10	<0.005	<0.005	<0.005	<0.005	36
Bromodichloromethane	µg/L	60	0.8	0.9	<0.5	1.8	242
Cadmium	mg/L	2	<0.0000	<0.0002	<0.0002	<0.0002	8
Calcium Hardness	mg/L CaCO3	60	107	117	96	141	240
Chlorate Dissolved	mg/L	10	0.153	0.148	0.050	0.332	36
Chloride Dissolved	mg/L	10	6.14	5.96	4.78	12.10	36
Chlorite Dissolved	mg/L	10	<0.01	<0.01	<0.01	<0.01	36
Chromium	mg/L	2	<0.0002	<0.0002	<0.0002	<0.0002	8
Colour	TCU	60	0.7	0.9	<0.5	1.9	240
Conductivity	µS/cm	10	373	400	342	453	36
Copper	mg/L	2	<0.0020	<0.0050	<0.0050	<0.0050	8
Cryptosporidium	oocysts/100L	2	<0.1	<0.1	<0.1	<0.1	4
Fluoride	mg/L	60	0.68	0.69	0.62	0.79	240
Giardia	cysts/100L	2	<0.1	<0.1	<0.1	<0.1	4
Iron	mg/L	2	<0.0050	<0.0050	<0.0050	<0.0050	8
Lead	mg/L	2	<0.0002	<0.0002	<0.0002	<0.0002	8
Manganese	mg/L	2	<0.0020	<0.0020	<0.0020	<0.0020	8
Mercury	mg/L	2	<0.0002	<0.0002	<0.0002	<0.0002	8
Nitrate (as N) Dissolved	mg/L	10	0.052	0.085	0.010	0.134	36
Nitrite (as N) Dissolved	mg/L	10	<0.01	<0.01	<0.01	0.02	36
pH	N/A	60	7.9	7.9	7.6	8.2	241
Potassium	mg/L	2	1.04	0.80	0.70	1.10	8
Sodium	mg/L	2	12.73	10.60	6.80	13.60	8
Sulphate Dissolved	mg/L	10	69.3	73.6	59.5	95.1	36
Total Chlorine	N/A	60	2.11	2.12	1.87	2.34	240
Total Dissolved Solids	mg/L	2	228	229	220	252	8
Total Hardness	mg/L CaCO3	60	160	179	145	218	240
Total Organic Carbon	mg/L C	10	1.1	1.3	0.9	1.7	36
Trihalomethanes	µg/L	60	8.6	9.6	5.1	20.1	242
Turbidity	NTU	60	0.05	<0.04	<0.04	0.09	240
Uranium	mg/L	2	<0.0005	<0.0005	<0.0005	0.0006	8
Zinc	mg/L	2	<0.0050	<0.0050	<0.0050	<0.0050	8
Bacteriological Data							
Coliforms, total	PA/100mL	60	Absent	Absent	Absent	Absent	240
E. coli	PA/100mL	60	Absent	Absent	Absent	Absent	240

2.1.3 SUMMARY OF LABORATORY ANALYSIS - 2024

DISTRIBUTION OF TESTING

Drinking Water Testing

		Jan	Feb	Mar	Apr	**Total**
Water Treatment Plant	# Tests	10,442	9,566	10,736	10,143	40,887
	# Samples	261	248	326	269	1,104
Field Reservoirs	# Tests	1,936	1,721	1,695	1,883	7,235
	# Samples	63	52	52	65	232
Routine Distribution System	# Tests	2,740	2,879	2,734	2,845	11,198
	# Samples	146	153	146	153	598
System Depressurization/Repair	# Tests	1,050	720	555	675	3,000
	# Samples	70	48	37	45	200
Customer Complaints	# Tests	1,395	651	1,209	1,488	4,743
	# Samples	15	7	13	16	51
Total	# Tests	17,563	15,537	16,929	17,034	67,063
	# Samples	555	508	574	548	2,185

Additional Testing

		Jan	Feb	Mar	Apr	**Total**
New Watermain Testing	# Tests	80	30	0	10	120
	# Samples	17	6	0	2	25
Water Treatment Plant Waste Discharge	# Tests	168	43	173	117	501
	# Samples	56	33	36	45	170
Quality Control	# Tests	5,961	6,042	6,091	5,937	24,031
	# Samples	1,187	1,056	1,193	1,186	4,622
Externally Contracted Analyses	# Tests	305	672	316	307	1,600
	# Samples	130	120	157	136	543
Total	# Tests	6,514	6,787	6,580	6,371	26,252
	# Samples	1,390	1,215	1,386	1,369	5,360

		Jan	Feb	Mar	Apr	**Total**
Total	# Tests	24,077	22,324	23,509	23,405	93,315
	# Samples	1,821	1,611	1,848	1,793	7,073

2.1.4 QUALITY ASSURANCE – April 2024

Drinking water quality must meet the requirements in the Alberta Environment and Protected Areas *Approval-to-Operate* (638-04-00) and the limits set out in the latest version of the Health Canada *Guidelines for Canadian Drinking Water Quality (GCDWQ)*. The latest internet edition of the *GCDWQ* was issued in September 2022 and supersedes all previous electronic and printed versions, including the Sixth Edition published 1996. Guideline limits are listed as Maximum Acceptable Concentrations (MACs), Aesthetic Objectives (AO) or Operational Guidelines (OG). The latest edition of the Health Canada Guidelines includes parameter types, commons sources, health considerations and application of the guideline.

In addition, for treated water in the distribution system, total chlorine residual values under 0.5 mg/L are not necessarily violations of the approval, but do require immediate follow-up action and re-sampling. A violation of the current *Approval-to-Operate* (638-04-00) requirements occurs if the chlorine residual in more than 25% of samples collected in a day is < 0.5 mg/L. Alberta Environment and Protected Areas is to be notified of any single positive total coliform sample and follow-up sampling is done according to the *Communication and Action Protocol for Failed Bacteriological Results in Drinking Water*. Any sample that is positive for *E. coli* is also considered a violation and requires follow-up action and re-sampling. A repeat total coliform positive from the same location is also considered a violation

Critical water quality parameters (e.g. turbidity, residual chlorine, fluoride, pH, & particle counts) in the treated water are monitored continuously using on-line instruments at the water treatment plants. In addition, water quality samples are collected daily at the two Water Treatment Plants, and 180 to 300 samples per month are collected throughout the distribution system (routine and random sampling sites, reservoirs, following system depressurizations and in response to customer complaints).

The EPCOR Water Laboratory is nationally accredited by CALA (Canadian Association for Laboratory Accreditation) to ISO/IEC 17025 for specific water quality analyses, and it also provides quality assurance support for Water Plant Operations labs and on-line analytical monitoring.

"*Violations*" occur when the concentrations of a measured parameter exceeds the AEP *Approval-to-Operate* limits, including the MACs for the GCDWQ parameters listed Schedule 4.

"Variances" occur when the concentration of a measured parameter exceeds EPCOR's own internal water quality objectives. See section 2.1.1 of this report for EPCOR's internal water quality objectives.

2.1.4.1 **Total Water Quality Violations of AEP Approval-to-Operate:**

Current month: **2** YTD Total: **2**

2.1.4.2 **Water Quality Violations for Water Plants (Treated Water)**

Current month**: 0** YTD Total**: 0**

2.1.4.3 **Water Quality Violations (Environmental): Plants Waste Streams**

Current month**: 0** YTD Total**: 0**

2.1.4.4 **Violations for Water Quality in the Field Reservoirs and Distribution System**

Sample Type	This Month	YTD
Depressurization Samples	0	0
Complaint Samples	0	0
Random Samples	2	2
Reservoirs	0	0
TOTAL (Distribution)	2	2

2.1.4.5 **Variances from EPCOR Water Services Water Quality Objectives at the Water Treatment Plants**

Variance Category[1]	This Month	YTD
Aluminium[2] > 0.20 or 0.10 mg/L	0	0
Turbidity > 1 NTU	0	0
Chlorine < 1 mg/L or > 2.4 mg/L	0	0
Cryptosporidium ≥ 1/1000 L	0	0
Giardia ≥ 1/1000 L	0	0
Other	0	0
Total Variances + Violations	0 + 0 = 0	0 + 0 = 0

Notes: 1) Variance statistics include any violations.

2) As of January 15, 2024 both ELS and ROS WTP converted back to Conventional Filtration mode. Aluminium limit changes from 0.1 mg/L to 0.2 mg/L (operational guideline), when in Direct Filtration.

2.1.4.6 **Variances from EPCOR Water Services Water Quality Objectives in the Field Reservoirs and Distribution System**

Variance Category[1]	This Month	YTD
Turbidity > 1 NTU	9	32
Chlorine < 1 mg/L or > 2.4 mg/L	3	5
Single Positive Coliform	1	2
THMs > 50 µg/L	0	0
Pipe Lube, Odour, UV positive	0	0
Aluminium[2] > 0.20 (or 0.1) mg/L	0	2
Iron > 0.300 mg/L	2	2
Other	0	0
Total Variances + Violations	15 + 2 = 17	43 + 2 = 45

Notes: 1) Variance statistics include any violations.
2) As of January 15, 2024 both ELS and ROS WTP converted back to Conventional Filtration mode. Aluminium limit changes from 0.1 mg/L to 0.2 mg/L (operational guideline), when in Direct Filtration.

2.1.4.7 **Variances from EPCOR Water Services Water Quality Objectives (Lab Waste Streams)**

No variances to report for lab waste streams.

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
January															
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
Raw River Water Entering the Treatment Plants	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
Water Entering the Plant Reservoir	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
Treated Water Entering the Distribution System	61	0	0.0				0	0.0				61	0.49	0.10	1.00
February															
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
Raw River Water Entering the Treatment Plants	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
Water Entering the Plant Reservoir	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
Treated Water Entering the Distribution System	57	0	0.0				0	0.0				57	0.71	0.11	1.00

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
March															
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
Raw River Water Entering the Treatment Plants	36			1,584	1	13,700			79	1	1,760	2	177	60.7	293
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
Water Entering the Plant Reservoir	62	0	0.0				0	0.0				62	0.74	0.12	1.00
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
Treated Water Entering the Distribution System	62	0	0.0				0	0.0				62	0.69	0.10	1.00
April															
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
Raw River Water Entering the Treatment Plants	35			225	1	1,120			8	1	58	2	109	92.2	126
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
Water Entering the Plant Reservoir	60	0	0.0				0	0.0				60	0.61	0.10	1.00
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
Treated Water Entering the Distribution System	60	0	0.0				0	0.0				60	0.57	0.10	1.00

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

2.2.2 Bacteriological Data: Distribution System

April 2024

	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	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	209	1	0.5	0	0.0	118	0.33	0.11	1.26
February									
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	205	0	0.0	0	0.0	106	0.21	0.10	1.09
March									
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	198	0	0.0	0	0.0	106	0.26	0.10	0.96
April									
FIELD DISTRIBUTION	151	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	216	1	0.5	0	0.0	120	0.32	0.10	2.48
Year to Date	1,045	2	0.2	0	0.0	450	0.29	0.10	2.48

2.2.2 Bacteriological Data: Distribution System

April 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

April 2024

	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	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
Year to Date	51	0	0.0	0	0.0	51	0.30	0.11	1.50
Samples from Depressurizations									
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				
Year to Date	200	0	0.0	0	0.0				

2.2.3 Giardia and Cryptosporidium

April 2024

Treated Water entering the distribution system

	Cryptosporidium		Giardia	
	oocysts/100L		cysts/100L	
	E.L. Smith	Rossdale	E.L. Smith	Rossdale
23 - Jan		<0.1		<0.1
	<0.09		<0.09	

Raw Water

	Cryptosporidium		Giardia	
	oocysts/100L		cysts/100L	
	E.L. Smith	Rossdale	E.L. Smith	Rossdale
23 - Jan		<6.93		<6.93
	<1.28		<1.28	

2.2.4 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Microbiologicals																		
Microcystin				0				0	<0.2	<0.2	<0.2	1	<0.2	<0.2	<0.2	1	1.5	
Physical																		
Colour (TCU)	0.7	<0.5	1.0	30	0.8	0.5	1.5	30	0.9	<0.5	1.9	120	0.9	<0.5	1.8	120	(15)	10
Conductivity (uS/cm)	368	342	384	5	377	351	398	5	396	342	439	18	401	351	453	18		<1
FPA-Intensity (N/A)	1.12	0.75	1.25	5	0.93	0.62	1.38	5	1.17	0.75	1.88	27	1.06	0.62	2.12	27		
pH (N/A)	7.9	7.8	8.1	30	7.9	7.6	8.2	30	7.9	7.7	8.1	121	7.9	7.6	8.2	120	(7.0 - 10.5)	7.3-8.3
Total Dissolved Solids (mg/L)	224	224	224	1	230	230	230	1	232	223	252	4	235	220	250	4	(500)	
Turbidity (NTU)	<0.04	<0.04	0.07	30	0.05	<0.04	0.08	30	<0.04	<0.04	0.07	120	0.05	<0.04	0.09	120		0.3
Primary Inorganics (mg/L)																		
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0003	<0.0002	<0.0005	4	<0.0003	<0.0002	<0.0005	4	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4	0.01	
Barium	0.050	0.050	0.050	1	0.049	0.049	0.049	1	0.056	0.050	0.062	4	0.055	0.049	0.060	4	2	
Boron	0.010	0.010	0.010	1	0.008	0.008	0.008	1	0.010	0.009	0.010	4	0.009	0.008	0.010	4	2	
Bromate Dissolved	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	18	<0.005	<0.005	<0.005	18	0.01	
Cadmium	<0.00000	<0.00002	<0.00000	1	<0.00000	<0.00002	<0.00000	1	<0.00020	<0.00002	<0.00020	4	<0.00020	<0.00002	<0.00020	4	0.007	
Chlorate Dissolved	0.25	0.22	0.29	5	0.09	0.05	0.12	5	0.23	0.18	0.33	18	0.09	0.05	0.12	18	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	18	<0.005	<0.005	<0.005	18	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	4	<0.004	<0.002	<0.005	4	2 (1)	
Fluoride	0.69	0.65	0.74	30	0.67	0.62	0.73	30	0.69	0.63	0.75	120	0.70	0.62	0.79	120	1.5	0.6–0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	4	<0.002	<0.002	<0.002	4	0.12 (0.02)	
Mercury	<0.0002	<0.00020	<0.0002	1	<0.0002	<0.00020	<0.0002	1	<0.0002	<0.00005	<0.0002	5	<0.0002	<0.00005	<0.0002	5	0.001	
Nitrate (as N) Dissolved	0.05	0.01	0.08	5	0.05	0.01	0.08	5	0.08	0.01	0.13	18	0.08	0.01	0.13	18	10	
Nitrite (as N) Dissolved	0.01	0.01	0.01	5	<0.01	<0.01	0.01	5	0.01	0.01	0.02	18	0.01	<0.01	0.02	18	1	
Selenium	0.0002	0.0002	0.0002	1	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	4	0.0003	0.0002	0.0003	4	0.05	
Total Chlorine	2.13	2.01	2.31	30	2.09	1.95	2.22	30	2.16	1.99	2.34	120	2.10	1.87	2.32	120	>1.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	0.0006	4	<0.0005	<0.0005	0.0005	4	0.02	

2.2.4 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Primary Organics (ug/L)																		
2,4-D				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1	100	
Atrazine				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1	5	
Benzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5	
Benzo(a)pyrene				0				0	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	1	0.04	
Bromoxynil				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121	2	
Chlorobenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	80 (30)	
Chlorpyrifos				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1	90	
Cyanazine				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Diazinon				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1		
Dicamba				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1	110	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	120	<0.5	<0.5	<0.5	120	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<3.0	121	<0.5	<0.5	<3.0	121	14	
Dichlorophenol (2,4)				0				0	<0.3	<0.3	<0.3	1	<0.3	<0.3	<0.3	1		
Diclofop-methyl				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Dimethoate				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1	20	
Diuron				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1		
Ethylbenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	140 (1.6)	
Glyphosate				0				0	<0.2	<0.2	<0.2	1	<0.2	<0.2	<0.2	1	280	
Haloacetic Acids, (HAA5)	16.3	16.3	16.3	1	14.1	14.1	14.1	1	17.7	16.3	20.5	4	14.8	13.7	17.7	4	80	40
Malathion				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1	190	
MCPA				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1	100	
Methylene Chloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	50	
Metolachlor				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1		
Metribuzin				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1	80	
NDMA	<0.0009	<0.0009	<0.0009	1	<0.0009	<0.0009	<0.0009	1	<0.0023	<0.0009	<0.0060	4	<0.0023	<0.0009	<0.0060	4	0.040	10
NTA (mg/L)				0				0	<0.4	<0.4	<0.4	1	<0.4	<0.4	<0.4	1	0.4	
Pentachlorophenol				0				0	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	1	60 (30)	
Perfluorooctane sulfonic acid (PFOS)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1	0.6	
Perfluorooctanoic acid (PFOA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1	0.0002	
Phorate				0				0	<0.25	<0.25	<0.25	1	<0.25	<0.25	<0.25	1		
Picloram				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Simazine				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Terbufos				0				0	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	1		
Tetrachloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	10	
Toluene	<0.6	<0.5	1.6	30	0.8	<0.5	3.3	30	<0.5	<0.5	1.6	121	<0.6	<0.5	3.3	121	60 (24)	

2.2.4 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Primary Organics (ug/L)																		
Total Xylenes	<1.0	<1.0	<1.0	30	<1.0	<1.0	<1.0	30	<1.0	<1.0	<2.5	121	<1.0	<1.0	<2.5	121	90	
Trichloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5	
Trifluralin				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Trihalomethanes	9.3	7.2	14.9	30	8.1	5.8	14.5	30	11.2	6.6	20.1	121	9.0	5.1	16.9	121	100	50
Vinyl Chloride	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	120	<1	<1	<1	120	2	
Secondary Inorganics (mg/L)																		
Alkalinity Total (mg CaCO3/L)	108	101	119	30	108	99	122	30	119	99	141	120	118	8	140	120		
Aluminum	0.023	0.023	0.023	1	0.028	0.028	0.028	1	0.044	0.023	0.089	4	0.043	0.026	0.089	4	2.9	0.1/0.2
Ammonia as NH3	0.12	0.08	0.15	6	0.09	0.08	0.12	6	0.12	0.08	0.16	29	0.11	0.08	0.15	29		
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4		
Bromide Dissolved	<0.01	<0.01	<0.01	5	<0.01	<0.01	<0.01	5	<0.01	<0.01	0.04	18	<0.01	<0.01	0.03	18		
Calcium	45.4	45.4	45.4	1	44.9	44.9	44.9	1	47.8	45.4	51.3	4	48.1	44.9	51.4	4		
Chloride Dissolved	5.6	5.2	6.3	5	6.5	5.7	7.5	5	6.4	4.8	11.4	18	6.7	5.6	12.1	18	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4		
Free Chlorine	<0.07	<0.07	<0.07	1	<0.07	<0.07	<0.07	1	<0.07	<0.07	<0.07	4	<0.07	<0.07	<0.07	4		
Hardness, Ca (mg CaCO3/L)	107	98	118	30	107	96	117	30	118	98	141	120	116	96	138	120		
Iron	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	(0.3)	0.3
Lanthanum	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	4	<0.001	<0.001	<0.001	4		
Lithium	0.0037	0.0037	0.0037	1	0.0032	0.0032	0.0032	1	0.0035	0.0031	0.0040	4	0.0033	0.0030	0.0037	4		
Magnesium	13.2	13.2	13.2	1	13.3	13.3	13.3	1	14.1	13.2	15.0	4	14.2	13.3	15.1	4		
Molybdenum	0.0007	0.0007	0.0007	1	0.0007	0.0007	0.0007	1	0.0009	0.0007	0.0010	4	0.0008	0.0007	0.0009	4		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	4	<0.0005	<0.0005	<0.0005	4		
Phosphate,Ortho (as P)	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	6	<0.02	<0.02	<0.02	5		
Phosphorus	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	4	<0.02	<0.02	<0.02	4		
Potassium	1.1	1.1	1.1	1	1.0	1.0	1.0	1	0.8	0.7	1.1	4	0.8	0.7	1.0	4		
Silicon	1.72	1.72	1.72	1	1.64	1.64	1.64	1	2.05	1.72	2.27	4	2.01	1.64	2.23	4		
Silver	<0.00000	<0.00002	<0.00000	1	<0.00000	<0.00002	<0.00000	1	<0.00020	<0.00002	<0.00020	4	<0.00020	<0.00002	<0.00020	4		
Sodium	11.5	11.5	11.5	1	13.6	13.6	13.6	1	9.5	6.8	11.5	4	10.9	7.4	13.6	4	(200)	
Strontium	0.463	0.463	0.463	1	0.461	0.461	0.461	1	0.457	0.429	0.488	4	0.454	0.423	0.478	4	7.0	
Sulphate Dissolved	67.6	62.4	73.0	5	70.5	64.1	77.2	5	72.5	59.5	86.8	18	75.0	60.4	95.1	18	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	4	<0.0004	<0.0002	<0.0005	4		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	4	<0.0005	<0.0005	<0.0005	4		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	4	<0.0005	<0.0005	<0.0005	4		
Total Hardness (mg/L CaCO3)	161	149	176	30	160	145	174	30	178	149	218	120	177	145	211	120		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	4	<0.0005	<0.0005	<0.0005	4		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4	(5.0)	
Zirconium	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	4	<0.001	<0.001	<0.001	4		

2.2.4 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L)																		
Aldicarb				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Aldrin				0				0	<0.008	<0.008	<0.008	1	<0.008	<0.008	<0.008	1		
Azinphos-methyl				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Bromochloroacetic acid	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	4	<1	<1	<1	4		
Bromodichloromethane	0.8	0.5	1.3	30	0.7	<0.5	1.5	30	1.0	<0.5	1.8	121	0.8	<0.5	1.5	121		16
Bromoform	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121		
Carbaryl				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1		
Carbofuran				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1		
Chloroform	8.1	6.00	13.1	30	7.0	5.10	12.5	30	10.0	5.70	20.1	121	7.9	4.30	16.4	121		
Dibromoacetic acid	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	4	<1	<1	<1	4		
Dibromochloromethane	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloroacetic acid	7.98	7.98	7.98	1	7.00	7.00	7.00	1	9.05	7.98	10.20	4	7.70	7.00	9.12	4		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dieldrin				0				0	<0.008	<0.008	<0.008	1	<0.008	<0.008	<0.008	1		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	(15)	
MIBK	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	121	<1	<1	<1	121		
Monobromoacetic acid	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	4	<1	<1	<1	4		
Monochloroacetic acid	<1	<1	<1	1	<1	<1	<1	1	<1	<1	<1	4	<1	<1	<1	4		
Parathion				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Perfluorobutanoic acid (PFBA)				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Perfluoroheptanoic acid (PFHpA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1		
Perfluorohexane sulfonic acid (PFHxS)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1		
Perfluorohexanoic acid (PFHxA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1		
Perfluorononanoic acid (PFNA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1		
Perfluoropentanoic acid (PFPeA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1		
Styrene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121		
Total Organic Carbon	1.2	1.0	1.3	5	1.1	0.9	1.3	5	1.3	1.0	1.7	18	1.2	0.9	1.7	18		
Total Volatile Organics (NonTHM)	1.4	<1.0	3.8	30	1.6	<1.0	5.5	30	<1.3	<1.0	3.8	121	<1.3	<1.0	5.5	121		
Total Volatile Organics (Unknown)				0				0	1.2	<0.5	7.7	36	1.3	<0.5	3.6	39		
Triallate				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1		
Trichloroacetic acid	8.30	8.30	8.30	1	7.06	7.06	7.06	1	8.63	7.95	10.30	4	7.10	6.22	8.61	4		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Xylene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		

Secondary Organics (ug/L)																		
Xylene (1,4)	<0.5	<0.5	0.6	30	<0.5	<0.5	0.9	30	<0.5	<0.5	0.6	121	<0.5	<0.5	0.9	121		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval limits. The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.5 ROSSDALE AND E.L. SMITH TREATED WATER ENTERING PLANT RESERVOIR

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Physical																		
Turbidity (NTU)	<0.04	<0.04	0.06	30	0.05	<0.04	0.06	30	<0.04	<0.04	0.13	120	0.05	<0.04	0.09	120		0.3
UV 254 %T ****	<95.7	<94.8	<96.8	30	<95.9	<95.0	<96.7	30	<94.8	<91.0	<96.9	120	<95.2	<91.1	<98.9	120		
Primary Inorganics (mg/L)																		
Bromate Dissolved	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	18	<0.005	<0.005	<0.005	18	0.01	
Chlorate Dissolved	0.25	0.20	0.33	5	0.08	0.05	0.11	5	0.23	0.18	0.34	18	0.08	0.05	0.12	18	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	5	<0.005	<0.005	<0.005	18	<0.005	<0.005	<0.005	18	1	
Nitrate (as N) Dissolved	0.05	0.01	0.08	5	0.05	0.01	0.08	5	0.08	0.01	0.14	18	0.08	0.01	0.13	18	10	
Nitrite (as N) Dissolved	<0.01	<0.01	0.01	5	<0.01	<0.01	0.01	5	0.01	<0.01	0.02	18	<0.01	<0.01	0.02	18	1	
Primary Organics (ug/L)																		
Benzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121	2	
Chlorobenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	80 (30)	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	120	<0.5	<0.5	<0.5	120	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<3.0	121	<0.5	<0.5	<3.0	121	14	
Ethylbenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	10	
Toluene	0.8	<0.5	4.1	30	<0.6	<0.5	1.8	30	<0.6	<0.5	4.1	121	<0.5	<0.5	1.8	121	60 (24)	
Total Xylenes	<1.0	<1.0	1.5	30	<1.0	<1.0	<1.0	30	<1.0	<1.0	<2.5	121	<1.0	<1.0	<2.5	121	90	
Trichloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	5	
Trihalomethanes	7.3	5.5	12.5	30	6.5	4.7	11.9	30	9.0	5.3	17.9	121	7.2	3.7	15.2	121	100	50
Vinyl Chloride	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	120	<1	<1	<1	120	2	
Secondary Inorganics (mg/L)																		
Ammonia as NH3	0.12	0.09	0.16	6	0.10	0.08	0.13	6	0.13	0.09	0.16	29	0.12	0.07	0.16	29		
Bromide Dissolved	<0.01	<0.01	<0.01	5	<0.01	<0.01	<0.01	5	<0.01	<0.01	0.04	18	<0.01	<0.01	0.03	18		
Chloride Dissolved	5.7	5.3	6.4	5	6.4	5.5	7.4	5	7.1	4.7	19.9	18	6.7	5.5	12.9	18	(250)	
Sulphate Dissolved	68.4	61.9	73.5	5	70.1	64.2	76.0	5	73.1	59.2	95.8	18	75.0	59.8	95.3	18	(500)	

2.2.5 ROSSDALE AND E.L. SMITH TREATED WATER ENTERING PLANT RESERVOIR

April 2024

	Current Month								YTD								Limits	
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH				*Approval or GCDWQ MAC, (AO or OG)	EPCOR
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count		
Secondary Organics (ug/L)																		
Bromodichloromethane	0.7	<0.5	1.0	30	0.6	<0.5	1.0	30	0.8	<0.5	1.4	121	0.7	<0.5	1.0	121		16
Bromoform	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121		
Chloroform	6.2	4.60	11.0	30	5.5	4.10	10.4	30	7.9	4.60	17.9	121	6.3	3.00	14.6	121		
Dibromochloromethane	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121	(15)	
MIBK	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	121	<1	<1	<1	121		
Styrene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121		
Total Volatile Organics (NonTHM)	1.6	<1.0	6.5	30	<1.3	<1.0	3.2	30	<1.3	<1.0	6.5	121	<1.2	<1.0	3.2	121		
Total Volatile Organics (Unknown)				0				0	1.0	<0.5	1.9	35	1.0	<0.5	2.1	38		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Xylene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121		
Xylene (1,4)	<0.6	<0.5	1.3	30	<0.5	<0.5	0.6	30	<0.5	<0.5	1.3	121	<0.5	<0.5	0.6	121		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

**** UV 254 %T for Rossdale based on a sample collected daily from one of the nine filters selected randomly. For E.L. Smith it is based on a daily sample of Combined Filter Effluent

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Microbiological										
Microcystin				0	<0.2	<0.2	<0.2	1	1.5	
Physical										
Colour (TCU)				0	0.7	0.7	0.7	1	(15)	10
pH (N/A)	7.8	7.8	7.9	2	7.8	7.8	7.9	7	(7.0 - 10.5)	7.3 - 8.3
Total Dissolved Solids (mg/L)				0	233	233	233	1	(500)	
Turbidity (NTU)	0.24	<0.04	5.03	153	0.23	<0.04	5.03	598		1.0
UV 254 %T				0	<92.7	<92.7	<92.7	1		
Primary Inorganics (mg/L) **										
Antimony				0	<0.0002	<0.0002	<0.0002	1	0.006	
Arsenic				0	<0.0002	<0.0002	<0.0002	1	0.01	
Barium				0	0.057	0.057	0.057	1	2	
Boron				0	0.009	0.009	0.009	1	2	
Bromate Dissolved	<0.005	<0.005	<0.005	2	<0.005	<0.005	<0.005	7	0.01	
Cadmium				0	<0.0002	<0.0002	<0.0002	1	0.007	
Chlorate Dissolved	0.20	0.16	0.23	2	0.16	0.08	0.23	7	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	2	<0.005	<0.005	<0.005	7	1	
Chromium				0	<0.0002	<0.0002	<0.0002	1	0.05	
Copper				0	<0.005	<0.005	<0.005	1	2 (1)	
Fluoride				0	0.74	0.74	0.74	1	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	1	0.005	
Manganese				0	<0.002	<0.002	<0.002	1	0.12 (0.02)	
Mercury				0	<0.00010	<0.00005	<0.00020	2	0.001	
Nitrate (as N) Dissolved	0.09	0.08	0.09	2	0.09	0.08	0.09	7	10	
Nitrite (as N) Dissolved	<0.01	<0.01	<0.01	2	0.01	<0.01	0.02	7	1	
Selenium				0	0.0003	0.0003	0.0003	1	0.05	
Strontium				0	0.445	0.445	0.445	1	7.0	
Total Chlorine	1.93	0.86	2.44	153	1.97	0.86	2.44	598	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	<0.0005	1	0.02	

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **										
2,4-D				0	<0.05	<0.05	<0.05	1	100	
Atrazine				0	<0.05	<0.05	<0.05	1	5	
Atrazine+N-Dealkylated Metabolites				0	<0.1	<0.1	<0.1	1	0.005	
Azinphos-methyl				0	<0.1	<0.1	<0.1	1	0.02	
Benzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	5	
Benzo(a)pyrene				0	<0.005	<0.005	<0.005	1	0.04	
Bromoxynil				0	<0.05	<0.05	<0.05	1	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	2	
Chlorobenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	80 (30)	
Chlorpyrifos				0	<0.1	<0.1	<0.1	1	90	
Cyanazine				0	<0.1	<0.1	<0.1	1		
Diazinon				0	<0.025	<0.025	<0.025	1		
Dicamba				0	<0.1	<0.1	<0.1	1	110	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	14	
Dichlorophenol (2,4)				0	<0.3	<0.3	<0.3	1		
Diclofop-methyl				0	<0.1	<0.1	<0.1	1		
Dimethoate				0	<0.05	<0.05	<0.05	1	20	
Diquat				0	<1	<1	<1	1	0.05	
Diuron				0	<0.05	<0.05	<0.05	1		
Ethylbenzene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	140 (1.6)	
Glyphosate				0	<0.2	<0.2	<0.2	1	280	
Malathion				0	<0.025	<0.025	<0.025	1	190	
MCPA				0	<0.05	<0.05	<0.05	1	100	
Methylene Chloride	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	50	
Metolachlor				0	<0.025	<0.025	<0.025	1		
Metribuzin				0	<0.1	<0.1	<0.1	1	80	
NDMA (µg/L)	<0.00170	<0.00100	<0.00220	3	<0.00300	<0.00100	0.00690	12	0.040	10
Nitrilotriacetic acid				0	<0.4	<0.4	<0.4	1	0.4	
Paraquat				0	<1	<1	<1	1	0.07	
Pentachlorophenol				0	<0.5	<0.5	<0.5	1	60 (30)	
Perfluorooctane sulfonic acid (PFOS)				0	<0.02	<0.02	<0.02	1	0.0006	
Perfluorooctanoic acid (PFOA)				0	<0.02	<0.02	<0.02	1	0.0002	
Phorate				0	<0.25	<0.25	<0.25	1		
Picloram				0	<0.1	<0.1	<0.1	1		
Simazine				0	<0.1	<0.1	<0.1	1		
Terbufos				0	<0.5	<0.5	<0.5	1		

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Primary Organics (ug/L) **										
Tetrachloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	10	
Tetrachlorophenol (2,3,4,6)				0	<0.5	<0.5	<0.5	1	100 (1)	
Toluene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	60 (24)	
Total Xylenes	<1	<1	<1	6	<1	<1	<1	24	90	
Trichloroethylene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	5	
Trichlorophenol (2,4,6)				0	<0.5	<0.5	<0.5	1	5 (2)	
Trifluralin				0	<0.1	<0.1	<0.1	1		
Vinyl Chloride	<1	<1	<1	6	<1	<1	<1	24	2	

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	121	121	121	1		
Alkalinity, PHP (mg CaCO3/L)				0	<3	<3	<3	1		
Aluminum				0	0.018	0.018	0.018	1	2.9	0.1/0.2
Ammonia as N	0.11	0.10	0.11	2	0.14	0.10	0.24	9		
Beryllium				0	<0.0002	<0.0002	<0.0002	1		
Bromide Dissolved	<0.01	<0.01	<0.01	2	0.02	<0.01	0.04	7		
Calcium				0	47.4	47.4	47.4	1		
Chloride Dissolved	7.4	7.2	7.6	2	6.1	4.9	7.6	7	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	1		
Free Chlorine				0	<0.07	<0.07	<0.07	1		
Iron				0	0.013	0.013	0.013	1	(0.3)	0.3
Lanthanum				0	<0.001	<0.001	<0.001	1		
Lithium				0	0.0034	0.0034	0.0034	1		
Magnesium				0	15.3	15.3	15.3	1		
Molybdenum				0	0.001	0.001	0.001	1		
Nickel				0	<0.0005	<0.0005	<0.0005	1		
Phosphorus				0	0.91	0.91	0.91	1		
Potassium				0	0.8	0.8	0.8	1		
Silicon				0	2.4	2.4	2.4	1		
Silver				0	<0.0002	<0.0002	<0.0002	1		
Sodium				0	11.2	11.2	11.2	1	(200)	
Sulphate Dissolved	69.6	67.9	71.2	2	68.9	59.0	75.1	7	(500)	
Thallium				0	<0.0005	<0.0005	<0.0005	1		
Tin				0	<0.0005	<0.0005	<0.0005	1		
Titanium				0	<0.0005	<0.0005	<0.0005	1		
Total Hardness (mg/L CaCO3)				0	183	183	183	1		
Total Kjeldahl Nitrogen				0	0.4	0.4	0.4	1		
Vanadium				0	<0.0005	<0.0005	<0.0005	1		
Zinc				0	<0.005	<0.005	<0.005	1	(5.0)	
Zirconium				0	<0.001	<0.001	<0.001	1		

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
2,4,5-T				0	<0.05	<0.05	<0.05	1		
6:2 Fluorotelomer sulfonic acid(6:2 FTS)				0	<0.02	<0.02	<0.02	1		
8:2 Fluorotelomer sulfonic acid(8:2 FTS)				0	<0.02	<0.02	<0.02	1		
a-chlordane				0	<0.008	<0.008	<0.008	1		
Alachlor				0	<0.05	<0.05	<0.05	1		
Aldicarb				0	<0.1	<0.1	<0.1	1		
Aldrin				0	<0.008	<0.008	<0.008	1		
Ametryn				0	<0.025	<0.025	<0.025	1		
Atrazine Desethyl				0	<0.025	<0.025	<0.025	1		
Bendiocarb				0	<0.025	<0.025	<0.025	1		
Bromochloroacetic acid	<1	<1	<1	6	<1	<1	<1	24		
Bromodichloromethane	0.8	0.6	0.9	6	1.0	0.6	1.5	24		16
Bromoform	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Carbaryl				0	<0.05	<0.05	<0.05	1		
Carbofuran				0	<0.025	<0.025	<0.025	1		
Chloroform	8.5	7.6	9.5	6	12.4	7.6	20.0	24		
Dibromoacetic acid	<1	<1	<1	6	<1	<1	<1	24		
Dibromochloromethane	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dichloroacetic acid	6.54	5.90	7.17	6	8.27	5.90	10.80	24		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Dieldrin				0	<0.008	<0.008	<0.008	1		
Dinoseb				0	<0.05	<0.05	<0.05	1		
gamma-hexachlorocyclohexane				0	<0.008	<0.008	<0.008	1		
g-chlordane				0	<0.008	<0.008	<0.008	1		
Heptachlor				0	<0.008	<0.008	<0.008	1		
Heptachlor Epoxide				0	<0.008	<0.008	<0.008	1		
Methoxychlor				0	<0.008	<0.008	<0.008	1		
Methyl Parathion				0	<0.1	<0.1	<0.1	1		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24	(15)	
MIBK	<1	<1	<1	6	<1	<1	<1	24		
Monobromoacetic acid	<1	<1	<1	6	<1	<1	<1	24		
Monochloroacetic acid	<1	<1	<1	6	<1	<1	<1	24		
op-DDT				0	<0.004	<0.004	<0.004	1		
Oxychlordane				0	<0.008	<0.008	<0.008	1		
Parathion				0	<0.1	<0.1	<0.1	1		
Perfluorobutane sulfonic acid (PFBS)				0	<0.02	<0.02	<0.02	1		

2.2.6.a Routine Distribution System (does not include Field Reservoirs)

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Perfluorobutanoic acid (PFBA)				0	<0.1	<0.1	<0.1	1		
Perfluoroheptanoic acid (PFHpA)				0	<0.02	<0.02	<0.02	1		
Perfluorohexane sulfonic acid (PFHxS)				0	<0.02	<0.02	<0.02	1		
Perfluorohexanoic acid (PFHxA)				0	<0.02	<0.02	<0.02	1		
Perfluorononanoic acid (PFNA)				0	<0.02	<0.02	<0.02	1		
Perfluoropentanoic acid (PFPeA)				0	<0.02	<0.02	<0.02	1		
pp-DDD				0	<0.004	<0.004	<0.004	1		
pp-DDE				0	<0.004	<0.004	<0.004	1		
pp-DDT				0	<0.004	<0.004	<0.004	1		
Prometon				0	<0.025	<0.025	<0.025	1		
Prometryne				0	<0.025	<0.025	<0.025	1		
Propazine				0	<0.025	<0.025	<0.025	1		
Styrene	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Temephos				0	<0.25	<0.25	<0.25	1		
Terbutryn				0	<0.025	<0.025	<0.025	1		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Total Organic Carbon				0	1.3	1.3	1.3	1		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	6	1.2	<1.0	2.2	24		
Total Volatile Organics (Unknown)				0	0.9	<0.5	1.6	9		
Triallate				0	<0.1	<0.1	<0.1	1		
Trichloroacetic acid	6.20	5.40	7.07	6	7.56	5.40	9.74	24		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Xylene (1,2)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		
Xylene (1,4)	<0.5	<0.5	<0.5	6	<0.5	<0.5	<0.5	24		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.6.b Additional Distribution System Samples Collected from Water Quality Complaint Investigations

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.7	<0.5	1.0	16	0.8	<0.5	1.8	51	(15)	10
pH (N/A)	7.8	7.7	8.0	16	7.8	7.6	8.1	51	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.60	<0.04	2.89	16	0.37	<0.04	2.89	51		1.0
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	16	<0.0004	<0.0002	<0.0005	51	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	16	<0.0002	<0.0002	<0.0002	51	0.01	
Barium	0.052	0.048	0.055	16	0.056	0.048	0.081	51	2	
Boron	0.011	0.008	0.028	16	0.012	0.007	0.036	51	2	
Cadmium	<Inoff	<0.00002	<Inoff	16	<0.00010	<0.00002	<0.00020	51	0.007	
Chromium	<0.0002	<0.0002	<0.0002	16	<0.0002	<0.0002	<0.0002	51	0.05	
Copper	0.004	<0.002	0.014	16	0.005	<0.002	0.048	51	2 (1)	
Lead	<0.0002	<0.0002	<0.0002	16	0.0002	<0.0002	0.0005	51	0.005	
Manganese	0.003	<0.002	0.005	16	0.002	<0.002	0.006	51	0.12 (0.02)	
Mercury	<0.00020	<0.00020	<0.00020	16	<0.00020	<0.00020	<0.00020	45	0.001	
Selenium	<0.0002	<0.0002	<0.0002	16	0.0002	<0.0002	0.0003	51	0.05	
Strontium	0.415	0.389	0.454	16	0.445	0.389	0.491	51	7.0	
Total Chlorine	1.78	1.24	2.07	16	1.91	1.24	2.27	51	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	16	0.0005	<0.0005	0.0006	51	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	2	
Chlorobenzene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	80 (30)	
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	14	
Ethylbenzene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	10	
Toluene	1.0	<0.5	3.4	16	0.6	<0.5	3.4	51	60 (24)	
Total Xylenes	1.0	<1.0	1.2	16	1.0	<1.0	1.2	51	90	
Trichloroethylene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	5	
Vinyl Chloride	<1	<1	<1	16	<1	<1	<1	51	2	

2.2.6.b Additional Distribution System Samples Collected from Water Quality Complaint Investigations

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Aluminum	0.024	0.012	0.063	16	0.048	0.012	0.759	51	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	16	<0.0002	<0.0002	<0.0002	51		
Calcium	43.7	39.9	47.5	16	47.9	39.9	54.3	51		
Cobalt	0.0002	<0.0002	0.0006	16	0.0002	<0.0002	0.0006	51		
Iron	0.091	<0.005	0.401	16	0.052	<0.005	0.401	51	(0.3)	0.3
Lanthanum	<0.001	<0.001	<0.001	16	<0.001	<0.001	<0.001	51		
Lithium	0.0036	0.0026	0.0076	16	0.0036	0.0026	0.0076	51		
Magnesium	12.0	11.3	13.4	16	13.8	11.3	16.4	51		
Molybdenum	0.0007	0.0006	0.0010	16	0.0008	0.0006	0.0011	51		
Nickel	0.0005	<0.0005	0.0009	16	0.0005	<0.0005	0.0009	51		
Phosphorus	0.96	0.33	1.11	16	0.97	0.33	1.43	51		
Potassium	1.1	0.9	1.4	16	1.0	0.7	2.8	51		
Silicon	1.81	1.63	1.99	16	2.09	1.63	2.69	51		
Silver	<Inoff	<0.00002	<Inoff	16	<0.00010	<0.00002	<0.00020	51		
Sodium	11.8	9.8	14.5	16	11.2	6.6	18.3	51	(200)	
Thallium	<0.0002	<0.0002	<0.0002	16	<0.0003	<0.0002	<0.0005	51		
Tin	<0.0005	<0.0005	<0.0005	16	<0.0005	<0.0005	<0.0005	51		
Titanium	<0.0005	<0.0005	<0.0005	16	<0.0005	<0.0005	<0.0005	51		
Total Hardness (mg/L CaCO3)				0	185	165	201	35		
Vanadium	<0.0005	<0.0005	<0.0005	16	<0.0005	<0.0005	<0.0005	51		
Zinc	<0.005	<0.005	<0.005	16	0.006	<0.005	0.023	51	(5.0)	
Zirconium	<0.001	<0.001	<0.001	16	<0.001	<0.001	<0.001	51		

2.2.6.b Additional Distribution System Samples Collected from Water Quality Complaint Investigations

April 2024

	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	1.0	0.6	1.4	16	1.0	<0.5	1.6	51		16
Bromoform	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Chloroform	9.4	7.0	11.6	16	11.7	5.6	20.1	51		
Dibromochloromethane	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51	(15)	
MIBK	<1	<1	<1	16	<1	<1	<1	51		
Styrene	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Total Volatile Organics (NonTHM)	1.9	<1.0	6.1	16	1.5	<1.0	6.1	51		
Total Volatile Organics (Unknown)	1.3	1.3	1.3	1	1.6	<0.5	7.7	13		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Xylene (1,2)	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5	51		
Xylene (1,4)	0.6	<0.5	1.1	16	0.5	<0.5	1.1	51		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.7 Castledowns Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.6	0.6	0.6	1	0.9	0.6	1.2	2	(15)	10
Conductivity (uS/cm)	400	400	400	1	396	391	400	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.8	7.8	7.8	1	7.8	7.8	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.07	0.06	0.08	5	0.14	0.06	0.46	16		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.051	0.051	0.051	1	0.054	0.051	0.056	2	2	
Boron	0.009	0.009	0.009	1	0.009	0.009	0.009	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.050	0.050	0.050	1	0.097	0.050	0.143	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.70	0.70	0.70	1	0.73	0.70	0.75	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	0.003	<0.002	0.003	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.080	0.080	0.080	1	0.085	0.080	0.090	2	10	
Nitrite (as N) Dissolved	0.010	0.010	0.010	1	<0.010	<0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.453	0.453	0.453	1	0.445	0.437	0.453	2	7.0	
Total Chlorine	2.02	1.97	2.06	5	1.79	1.27	2.06	16	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	2	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2	2	

2.2.7 Castledowns Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	112	112	112	1	117	112	122	2		
Aluminum	0.022	0.022	0.022	1	0.027	0.022	0.031	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	45.5	45.5	45.5	1	46.6	45.5	47.7	2		
Calcium Hardness				0	121	121	121	1		
Chloride Dissolved	7.4	7.4	7.4	1	6.8	6.2	7.4	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	<0.005	<0.005	<0.005	1	0.042	<0.005	0.078	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0032	0.0032	0.0032	1	0.0031	0.0030	0.0032	2		
Magnesium	13.3	13.3	13.3	1	13.5	13.3	13.7	2		
Molybdenum	0.0008	0.0008	0.0008	1	0.0009	0.0008	0.0009	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.88	0.86	0.92	5		
Phosphorus	1.02	1.02	1.02	1	0.95	0.87	1.02	2		
Potassium	1.20	1.20	1.20	1	1.00	0.80	1.20	2		
Silicon	1.67	1.67	1.67	1	1.94	1.67	2.21	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	14.1	14.1	14.1	1	12.0	9.9	14.1	2	(200)	
Sulphate Dissolved	72	72	72	1	71	70	72	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	184	184	184	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.7 Castledowns Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	0.6	0.6	0.6	1	0.9	0.6	1.2	2		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Chloroform	6.9	6.9	6.9	1	12.7	6.9	18.4	2		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Total Organic Carbon	0.9	0.9	0.9	1	1.1	0.9	1.3	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Total Volatile Organics (Unknown)				0	0.7	0.7	0.7	1		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.8 Clareview Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	0.7	0.7	0.7	2	(15)	10
Conductivity (uS/cm)				0	395	368	421	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.9	7.8	7.9	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.12	0.11	0.12	5	0.13	0.10	0.23	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	<0.0002	<0.0002	0.0002	2	0.01	
Barium				0	0.059	0.056	0.061	2	2	
Boron				0	0.009	0.008	0.010	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.182	0.172	0.191	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.69	0.66	0.71	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.090	0.090	0.090	2	10	
Nitrite (as N) Dissolved				0	0.010	0.010	0.010	2	1	
Selenium				0	0.0003	0.0002	0.0003	2	0.05	
Strontium				0	0.466	0.451	0.481	2	7.0	
Total Chlorine	1.93	1.91	1.96	5	1.98	1.91	2.09	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.8 Clareview Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	124	119	129	2		
Aluminum				0	0.051	0.023	0.078	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	49.8	48.2	51.3	2		
Calcium Hardness				0	124	118	130	2		
Chloride Dissolved				0	5.7	5.5	5.8	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	0.012	0.012	0.012	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0035	0.0032	0.0038	2		
Magnesium				0	14.7	14.4	14.9	2		
Molybdenum				0	0.0008	0.0006	0.0009	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.86	0.86	0.86	1	0.88	0.86	0.92	6		
Phosphorus				0	0.94	0.91	0.96	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.03	1.93	2.13	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	8.9	7.2	10.5	2	(200)	
Sulphate Dissolved				0	68	60	76	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	188	177	198	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.8 Clareview Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	1.1	0.9	1.3	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	16.5	13.9	19.1	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.3	1.3	1.3	2		
Total Volatile Organics (NonTHM)				0	1.6	1.3	1.8	2		
Total Volatile Organics (Unknown)				0	1.0	1.0	1.0	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.9 Discovery Park Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	0.9	0.8	1.0	2	(15)	10
Conductivity (uS/cm)				0	388	367	408	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	8.0	7.9	8.0	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.09	0.06	0.16	5	0.09	0.06	0.16	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	0.0003	<0.0002	0.0003	2	0.01	
Barium				0	0.056	0.054	0.057	2	2	
Boron				0	0.009	0.008	0.009	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.099	0.090	0.108	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.73	0.68	0.77	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.095	0.090	0.100	2	10	
Nitrite (as N) Dissolved				0	<0.010	<0.010	0.010	2	1	
Selenium				0	0.0003	0.0003	0.0003	2	0.05	
Strontium				0	0.459	0.443	0.474	2	7.0	
Total Chlorine	1.45	1.38	1.54	5	1.51	1.38	1.68	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.9 Discovery Park Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	121	116	126	2		
Aluminum				0	0.057	0.021	0.093	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	45.9	45.6	46.2	2		
Calcium Hardness				0	119	113	124	2		
Chloride Dissolved				0	6.1	6.0	6.1	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0032	0.0030	0.0034	2		
Magnesium				0	14.0	13.8	14.2	2		
Molybdenum				0	0.0008	0.0006	0.0009	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.86	0.86	0.86	1	0.89	0.86	0.92	6		
Phosphorus				0	0.92	0.91	0.93	2		
Potassium				0	0.80	0.80	0.80	2		
Silicon				0	1.90	1.89	1.90	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.5	7.4	11.6	2	(200)	
Sulphate Dissolved				0	67	59	75	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	178	174	182	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.9 Discovery Park Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	0.9	0.7	1.1	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	14.4	11.7	17.1	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.2	1.2	1.2	2		
Total Volatile Organics (NonTHM)				0	1.5	<1.0	1.9	2		
Total Volatile Organics (Unknown)				0	1.2	1.2	1.2	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

Footnote: The Discovery Park reservoir was officially included as part of EWSI's Approval to Operate, Approval 638-04-00, starting on January 19, 2021. From January 1 - 18, 2021 the Discovery Park Waterworks System operated under the Environmental Protection and Enhancement Act (EPEA) Registration no. 462525-00-00. This Registration was issued for Discovery Park Waterworks System to follow the Code of Practice for a Waterworks System Consisting Solely of a Water Distribution System.

2.2.10 Kaskitayo Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	1.4	1.1	1.6	2	(15)	10
Conductivity (uS/cm)				0	398	370	426	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.9	7.8	7.9	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.07	0.05	0.09	5	0.08	0.05	0.14	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	<0.0002	<0.0002	0.0002	2	0.01	
Barium				0	0.058	0.056	0.060	2	2	
Boron				0	0.009	0.008	0.009	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.090	0.080	0.100	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.73	0.72	0.74	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.090	0.080	0.100	2	10	
Nitrite (as N) Dissolved				0	0.010	0.010	0.010	2	1	
Selenium				0	0.0003	0.0002	0.0003	2	0.05	
Strontium				0	0.471	0.458	0.483	2	7.0	
Total Chlorine	2.04	1.99	2.07	5	2.08	1.98	2.23	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.10 Kaskitayo Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	123	118	128	2		
Aluminum				0	0.060	0.022	0.097	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	49.5	47.7	51.2	2		
Calcium Hardness				0	124	118	129	2		
Chloride Dissolved				0	6.2	6.0	6.5	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0033	0.0029	0.0036	2		
Magnesium				0	14.6	14.1	15.1	2		
Molybdenum				0	0.0007	0.0006	0.0008	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.91	0.88	0.94	6		
Phosphorus				0	0.95	0.92	0.98	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.01	1.93	2.08	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.9	7.4	12.3	2	(200)	
Sulphate Dissolved				0	70	61	80	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	184	178	190	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.10 Kaskitayo Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	0.8	0.7	0.8	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	11.6	9.8	13.4	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.2	1.2	1.2	2		
Total Volatile Organics (NonTHM)				0	1.5	<1.0	2.0	2		
Total Volatile Organics (Unknown)				0	1.1	1.1	1.1	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.11 Londonderry Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.7	0.7	0.7	1	1.0	0.7	1.2	2	(15)	10
Conductivity (uS/cm)	391	391	391	1	391	390	391	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.7	7.7	7.7	1	7.7	7.7	7.7	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.07	0.07	0.08	5	0.10	0.07	0.22	18		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.052	0.052	0.052	1	0.054	0.052	0.056	2	2	
Boron	0.012	0.012	0.012	1	0.011	0.010	0.012	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.238	0.238	0.238	1	0.213	0.188	0.238	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.70	0.70	0.70	1	0.72	0.70	0.73	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.090	0.090	0.090	1	0.085	0.080	0.090	2	10	
Nitrite (as N) Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.459	0.459	0.459	1	0.436	0.412	0.459	2	7.0	
Total Chlorine	1.98	1.96	2.04	5	2.06	1.96	2.25	18	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	2	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2	2	

2.2.11 Londonderry Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	110	110	110	1	116	110	121	2		
Aluminum	0.018	0.018	0.018	1	0.021	0.018	0.023	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	44.6	44.6	44.6	1	46.9	44.6	49.2	2		
Calcium Hardness				0	122	122	122	1		
Chloride Dissolved	7.2	7.2	7.2	1	6.4	5.7	7.2	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0039	0.0039	0.0039	1	0.0036	0.0033	0.0039	2		
Magnesium	13.3	13.3	13.3	1	13.8	13.3	14.3	2		
Molybdenum	0.0008	0.0008	0.0008	1	0.0009	0.0008	0.0010	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.90	0.88	0.92	6		
Phosphorus	1.03	1.03	1.03	1	0.96	0.89	1.03	2		
Potassium	1.40	1.40	1.40	1	1.10	0.80	1.40	2		
Silicon	1.83	1.83	1.83	1	2.09	1.83	2.35	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	13.0	13.0	13.0	1	11.4	9.8	13.0	2	(200)	
Sulphate Dissolved	73	73	73	1	73	73	73	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	184	184	184	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.11 Londonderry Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	1.0	1.0	1.0	1	1.2	1.0	1.4	2		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Chloroform	8.5	8.5	8.5	1	11.5	8.5	14.5	2		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Total Organic Carbon	1.0	1.0	1.0	1	1.2	1.0	1.4	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.12 Millwoods Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	<0.5	<0.5	<0.5	1	0.9	<0.5	1.2	2	(15)	10
Conductivity (uS/cm)	389	389	389	1	396	389	402	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.8	7.8	7.8	1	7.7	7.7	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.08	0.07	0.12	5	0.09	0.06	0.13	18		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.051	0.051	0.051	1	0.054	0.051	0.056	2	2	
Boron	0.009	0.009	0.009	1	0.010	0.009	0.010	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.100	0.100	0.100	1	0.095	0.090	0.100	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.72	0.72	0.72	1	0.70	0.68	0.72	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.080	0.080	0.080	1	0.080	0.080	0.080	2	10	
Nitrite (as N) Dissolved	0.010	0.010	0.010	1	0.010	0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.461	0.461	0.461	1	0.442	0.422	0.461	2	7.0	
Total Chlorine	2.05	2.03	2.08	5	2.09	2.02	2.21	18	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	3	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3	2	

2.2.12 Millwoods Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	112	112	112	1	118	112	123	2		
Aluminum	0.023	0.023	0.023	1	0.023	0.022	0.023	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	45.2	45.2	45.2	1	46.8	45.2	48.4	2		
Calcium Hardness				0	122	122	122	1		
Chloride Dissolved	7.2	7.2	7.2	1	6.7	6.1	7.2	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0033	0.0033	0.0033	1	0.0032	0.0031	0.0033	2		
Magnesium	13.3	13.3	13.3	1	13.7	13.3	14.1	2		
Molybdenum	0.0007	0.0007	0.0007	1	0.0009	0.0007	0.0011	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.91	0.88	0.96	6		
Phosphorus	1.01	1.01	1.01	1	0.96	0.90	1.01	2		
Potassium	1.10	1.10	1.10	1	0.95	0.80	1.10	2		
Silicon	1.67	1.67	1.67	1	1.98	1.67	2.29	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	13.3	13.3	13.3	1	13.0	12.7	13.3	2	(200)	
Sulphate Dissolved	72	72	72	1	73	72	75	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	185	185	185	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.12 Millwoods Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	0.7	0.7	0.7	1	0.9	0.7	1.0	3		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Chloroform	6.8	6.8	6.8	1	8.3	6.8	9.9	3		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Total Organic Carbon	0.9	0.9	0.9	1	1.1	0.9	1.3	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.0	<1.0	1.1	3		
Total Volatile Organics (Unknown)				0	1.3	1.3	1.3	1		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.13 North Jasper Place Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	0.8	0.6	1.0	2	(15)	10
Conductivity (uS/cm)				0	394	367	421	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.8	7.8	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.08	0.07	0.10	5	0.09	0.05	0.13	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	0.0003	<0.0002	0.0003	2	0.01	
Barium				0	0.057	0.054	0.060	2	2	
Boron				0	0.009	0.008	0.010	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.095	0.080	0.110	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.70	0.69	0.71	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.095	0.090	0.100	2	10	
Nitrite (as N) Dissolved				0	<0.010	<0.010	0.010	2	1	
Selenium				0	0.0003	0.0002	0.0003	2	0.05	
Strontium				0	0.462	0.443	0.481	2	7.0	
Total Chlorine	1.84	1.76	1.87	5	1.89	1.76	2.07	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.13 North Jasper Place Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	123	117	128	2		
Aluminum				0	0.063	0.024	0.102	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	48.7	46.4	51.0	2		
Calcium Hardness				0	122	116	128	2		
Chloride Dissolved				0	6.1	6.0	6.1	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0033	0.0030	0.0036	2		
Magnesium				0	14.4	14.0	14.7	2		
Molybdenum				0	0.0007	0.0005	0.0009	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.90	0.88	0.96	6		
Phosphorus				0	0.95	0.92	0.98	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.00	1.91	2.08	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.5	7.2	11.8	2	(200)	
Sulphate Dissolved				0	69	60	78	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	184	173	194	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.13 North Jasper Place Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	1.0	0.9	1.1	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	15.5	12.7	18.2	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.3	1.2	1.3	2		
Total Volatile Organics (NonTHM)				0	1.6	<1.0	2.1	2		
Total Volatile Organics (Unknown)				0	1.7	1.7	1.7	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.14 Ormsby Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.6	0.6	0.6	1	0.9	0.6	1.1	2	(15)	10
Conductivity (uS/cm)	395	395	395	1	402	395	408	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.8	7.8	7.8	1	7.8	7.8	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.09	0.08	0.11	5	0.09	0.07	0.13	18		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.051	0.051	0.051	1	0.054	0.051	0.057	2	2	
Boron	0.011	0.011	0.011	1	0.011	0.010	0.011	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.060	0.060	0.060	1	0.070	0.060	0.080	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.71	0.71	0.71	1	0.70	0.68	0.71	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.080	0.080	0.080	1	0.080	0.080	0.080	2	10	
Nitrite (as N) Dissolved	0.010	0.010	0.010	1	0.010	0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.458	0.458	0.458	1	0.441	0.424	0.458	2	7.0	
Total Chlorine	2.00	1.98	2.01	5	2.05	1.98	2.15	18	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	3	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3	2	

2.2.14 Ormsby Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	112	112	112	1	118	112	123	2		
Aluminum	0.032	0.032	0.032	1	0.028	0.023	0.032	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	43.9	43.9	43.9	1	45.6	43.9	47.3	2		
Calcium Hardness				0	122	122	122	1		
Chloride Dissolved	7.5	7.5	7.5	1	6.9	6.3	7.5	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0032	0.0032	0.0032	1	0.0031	0.0030	0.0032	2		
Magnesium	13.1	13.1	13.1	1	13.5	13.1	13.8	2		
Molybdenum	0.0008	0.0008	0.0008	1	0.0010	0.0008	0.0011	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.90	0.90	0.90	1	0.91	0.84	0.98	6		
Phosphorus	1.00	1.00	1.00	1	0.94	0.88	1.00	2		
Potassium	1.30	1.30	1.30	1	1.05	0.80	1.30	2		
Silicon	1.68	1.68	1.68	1	2.01	1.68	2.33	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	14.4	14.4	14.4	1	13.7	12.9	14.4	2	(200)	
Sulphate Dissolved	74	74	74	1	74	74	75	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	185	185	185	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.14 Ormsby Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	0.8	0.8	0.8	1	1.0	0.8	1.1	3		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Chloroform	6.6	6.6	6.6	1	8.3	6.6	10.1	3		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Total Organic Carbon	0.9	0.9	0.9	1	1.1	0.9	1.3	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.1	<1.0	1.2	3		
Total Volatile Organics (Unknown)				0	0.9	0.6	1.2	2		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.15 Papaschase 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.7	0.7	0.7	1	0.9	0.7	1.0	2	(15)	10
Conductivity (uS/cm)	379	379	379	1	393	379	407	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.8	7.8	7.8	1	7.7	7.7	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.13	0.10	0.14	5	0.13	0.10	0.18	18		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.050	0.050	0.050	1	0.054	0.050	0.058	2	2	
Boron	0.008	0.008	0.008	1	0.009	0.008	0.010	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.261	0.261	0.261	1	0.226	0.190	0.261	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.75	0.75	0.75	1	0.72	0.69	0.75	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.080	0.080	0.080	1	0.085	0.080	0.090	2	10	
Nitrite (as N) Dissolved	0.010	0.010	0.010	1	0.010	0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.455	0.455	0.455	1	0.439	0.423	0.455	2	7.0	
Total Chlorine	1.92	1.79	2.11	5	1.96	1.79	2.15	18	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	3	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3	2	

2.2.15 Papaschase 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	110	110	110	1	115	110	120	2		
Aluminum	0.019	0.019	0.019	1	0.020	0.019	0.021	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	45.1	45.1	45.1	1	47.6	45.1	50.1	2		
Calcium Hardness				0	123	123	123	1		
Chloride Dissolved	6.3	6.3	6.3	1	6.9	6.3	7.5	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	0.010	0.010	0.010	1	0.013	0.010	0.015	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0033	0.0033	0.0033	1	0.0034	0.0033	0.0034	2		
Magnesium	13.1	13.1	13.1	1	13.8	13.1	14.5	2		
Molybdenum	0.0007	0.0007	0.0007	1	0.0009	0.0007	0.0011	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.86	0.86	0.86	1	0.87	0.86	0.88	6		
Phosphorus	0.97	0.97	0.97	1	0.93	0.88	0.97	2		
Potassium	1.10	1.10	1.10	1	0.95	0.80	1.10	2		
Silicon	1.68	1.68	1.68	1	2.04	1.68	2.39	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	11.3	11.3	11.3	1	11.4	11.3	11.4	2	(200)	
Sulphate Dissolved	70	70	70	1	72	70	74	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	185	185	185	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.15 Papaschase 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	0.7	0.7	0.7	1	1.0	0.7	1.6	3		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Chloroform	7.8	7.8	7.8	1	10.3	7.8	12.2	3		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	3		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	3		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Total Organic Carbon	0.9	0.9	0.9	1	1.2	0.9	1.4	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.1	<1.0	1.3	3		
Total Volatile Organics (Unknown)				0	<0.5	<0.5	<0.5	1		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	3		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.16 Papaschase 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	1.2	0.9	1.4	2	(15)	10
Conductivity (uS/cm)				0	403	375	430	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.9	7.8	7.9	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.07	0.06	0.08	5	0.08	0.06	0.11	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	<0.0002	<0.0002	0.0002	2	0.01	
Barium				0	0.058	0.055	0.060	2	2	
Boron				0	0.009	0.008	0.010	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.135	0.108	0.161	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.73	0.71	0.74	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.095	0.090	0.100	2	10	
Nitrite (as N) Dissolved				0	<0.010	<0.010	0.010	2	1	
Selenium				0	0.0003	0.0003	0.0003	2	0.05	
Strontium				0	0.461	0.445	0.477	2	7.0	
Total Chlorine	2.03	1.96	2.09	5	2.05	1.96	2.17	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.16 Papaschase 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	124	120	128	2		
Aluminum				0	0.054	0.023	0.084	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	49.8	47.3	52.2	2		
Calcium Hardness				0	123	116	130	2		
Chloride Dissolved				0	6.5	5.8	7.2	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0034	0.0030	0.0038	2		
Magnesium				0	14.5	14.1	14.8	2		
Molybdenum				0	0.0007	0.0006	0.0008	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.86	0.86	0.86	1	0.89	0.86	0.92	6		
Phosphorus				0	0.94	0.89	0.98	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.04	1.93	2.14	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.7	7.0	12.3	2	(200)	
Sulphate Dissolved				0	70	60	79	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	186	177	194	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.16 Papaschase 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	0.9	0.8	0.9	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	12.8	9.9	15.6	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.2	1.2	1.2	2		
Total Volatile Organics (NonTHM)				0	1.4	<1.0	1.8	2		
Total Volatile Organics (Unknown)				0	0.6	0.6	0.6	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.17 Rosslyn 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)	0.6	0.6	0.6	1	1.0	0.6	1.4	2	(15)	10
Conductivity (uS/cm)	397	397	397	1	399	397	400	2		
Odour	Inoff	Inoff	Inoff	1	Inoff	Inoff	Inoff	2		
pH (N/A)	7.8	7.8	7.8	1	7.8	7.7	7.8	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.17	0.08	0.53	5	0.13	0.08	0.53	18		1
Primary Inorganics (mg/L) **										
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.01	
Barium	0.053	0.053	0.053	1	0.055	0.053	0.056	2	2	
Boron	0.014	0.014	0.014	1	0.012	0.010	0.014	2	2	
Bromate Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	0.01	
Cadmium	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved	0.175	0.175	0.175	1	0.167	0.158	0.175	2	1	
Chlorite Dissolved	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	1	
Chromium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.05	
Copper	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride	0.71	0.71	0.71	1	0.72	0.71	0.73	2	1.5	0.6 - 0.8
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved	0.090	0.090	0.090	1	0.085	0.080	0.090	2	10	
Nitrite (as N) Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	0.010	2	1	
Selenium	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	2	0.05	
Strontium	0.459	0.459	0.459	1	0.443	0.426	0.459	2	7.0	
Total Chlorine	1.92	1.85	1.96	5	1.93	1.77	2.07	18	>0.5 and <3.0	>1.0 and <2.4
Uranium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	2	
Chlorobenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	14	
Ethylbenzene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	10	
Toluene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes	<1	<1	<1	1	<1	<1	<1	2	90	
Trichloroethylene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2	2	

2.2.17 Rosslyn 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total	112	112	112	1	117	112	122	2		
Aluminum	0.020	0.020	0.020	1	0.026	0.020	0.032	2	2.9	0.1/0.2
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved	<0.010	<0.010	<0.010	1	<0.010	<0.010	<0.010	2		
Calcium	45.2	45.2	45.2	1	47.5	45.2	49.8	2		
Calcium Hardness				0	122	122	122	1		
Chloride Dissolved	7.6	7.6	7.6	1	6.7	5.8	7.6	2	(250)	
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	2		
Iron	0.008	0.008	0.008	1	0.008	0.007	0.008	2	(0.3)	0.3
Lanthanum	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		
Lithium	0.0035	0.0035	0.0035	1	0.0034	0.0032	0.0035	2		
Magnesium	13.4	13.4	13.4	1	14.0	13.4	14.6	2		
Molybdenum	0.0008	0.0008	0.0008	1	0.0009	0.0008	0.0010	2		
Nickel	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.89	0.86	0.90	6		
Phosphorus	1.00	1.00	1.00	1	0.96	0.91	1.00	2		
Potassium	1.50	1.50	1.50	1	1.15	0.80	1.50	2		
Silicon	1.76	1.76	1.76	1	2.06	1.76	2.35	2		
Silver	<Inoff	<Inoff	<Inoff	1	<0.0001	<Inoff	<0.0002	2		
Sodium	14.4	14.4	14.4	1	12.6	10.7	14.4	2	(200)	
Sulphate Dissolved	75	75	75	1	74	73	75	2	(500)	
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	2		
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Titanium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	183	183	183	1		
Vanadium	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	2		
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium	<0.0010	<0.0010	<0.0010	1	<0.0010	<0.0010	<0.0010	2		

2.2.17 Rosslyn 1 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane	0.8	0.8	0.8	1	1.2	0.8	1.5	2		16
Bromoform	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Chloroform	8.9	8.9	8.9	1	11.3	8.9	13.7	2		
Dibromochloromethane	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2	(15)	
MIBK	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Styrene	<0.50	<0.50	<0.50	1	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Total Organic Carbon	1.0	1.0	1.0	1	1.2	1.0	1.3	2		
Total Volatile Organics (NonTHM)	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	2		
Total Volatile Organics (Unknown)				0	1.0	1.0	1.0	1		
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,2)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		
Xylene (1,4)	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.18 Rosslyn 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	0.8	0.6	0.9	2	(15)	10
Conductivity (uS/cm)				0	394	369	419	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.9	7.8	7.9	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.09	0.08	0.10	5	0.10	0.08	0.14	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	<0.0002	<0.0002	<0.0002	2	0.01	
Barium				0	0.058	0.054	0.061	2	2	
Boron				0	0.009	0.008	0.009	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.166	0.147	0.184	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.70	0.68	0.71	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.095	0.090	0.100	2	10	
Nitrite (as N) Dissolved				0	<0.010	<0.010	0.010	2	1	
Selenium				0	0.0003	<0.0002	0.0003	2	0.05	
Strontium				0	0.463	0.443	0.482	2	7.0	
Total Chlorine	1.83	1.77	1.86	5	1.92	1.77	2.08	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.18 Rosslyn 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	125	122	127	2		
Aluminum				0	0.053	0.025	0.081	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	49.1	47.2	51.0	2		
Calcium Hardness				0	122	116	128	2		
Chloride Dissolved				0	5.7	5.6	5.9	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0034	0.0031	0.0037	2		
Magnesium				0	14.6	14.3	14.9	2		
Molybdenum				0	0.0008	0.0006	0.0009	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.88	0.88	0.88	1	0.89	0.88	0.92	6		
Phosphorus				0	0.93	0.90	0.96	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.04	1.95	2.12	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.0	7.1	10.9	2	(200)	
Sulphate Dissolved				0	68	59	77	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	186	178	194	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.18 Rosslyn 2 Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	1.1	1.0	1.1	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	16.8	14.6	18.9	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.3	1.3	1.3	2		
Total Volatile Organics (NonTHM)				0	1.4	<1.0	1.8	2		
Total Volatile Organics (Unknown)				0	1.9	1.9	1.9	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

** Primary parameters are those that have health-based limits (MACs) according the AEP Operating Approval 638-04-00

*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.19 Thorncliff Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Physical										
Colour (TCU)				0	0.9	0.7	1.1	2	(15)	10
Conductivity (uS/cm)				0	394	368	420	2		
Odour				0	Inoff	Inoff	Inoff	2		
pH (N/A)				0	7.9	7.9	7.9	2	(7.0 - 10.5)	7.3 - 8.3
Turbidity (NTU)	0.11	0.05	0.20	5	0.09	0.05	0.20	18		1
Primary Inorganics (mg/L) **										
Antimony				0	<0.0004	<0.0002	<0.0005	2	0.006	
Arsenic				0	0.0003	<0.0002	0.0003	2	0.01	
Barium				0	0.058	0.055	0.060	2	2	
Boron				0	0.009	0.008	0.009	2	2	
Bromate Dissolved				0	<0.005	<0.005	<0.005	2	0.01	
Cadmium				0	<0.0001	<Inoff	<0.0002	2	0.007	
Chlorate Dissolved				0	0.095	0.080	0.109	2	1	
Chlorite Dissolved				0	<0.005	<0.005	<0.005	2	1	
Chromium				0	<0.0002	<0.0002	<0.0002	2	0.05	
Copper				0	<0.004	<0.002	<0.005	2	2 (1)	
Fluoride				0	0.74	0.71	0.77	2	1.5	0.6 - 0.8
Lead				0	<0.0002	<0.0002	<0.0002	2	0.005	
Manganese				0	<0.002	<0.002	<0.002	2	0.12 (0.02)	
Mercury				0	<0.0002	<0.0002	<0.0002	2	0.001	
Nitrate (as N) Dissolved				0	0.090	0.080	0.100	2	10	
Nitrite (as N) Dissolved				0	<0.010	<0.010	0.010	2	1	
Selenium				0	0.0003	0.0002	0.0003	2	0.05	
Strontium				0	0.462	0.447	0.476	2	7.0	
Total Chlorine	1.89	1.77	2.15	5	1.95	1.77	2.23	18	>0.5 and <3.0	>1.0 and <2.4
Uranium				0	<0.0005	<0.0005	0.0005	2	0.02	
Primary Organics (ug/L) **										
Benzene				0	<0.5	<0.5	<0.5	2	5	
Carbon Tetrachloride				0	<0.5	<0.5	<0.5	2	2	
Chlorobenzene				0	<0.50	<0.50	<0.50	2	80 (30)	
Dichlorobenzene (1,2)				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,4)				0	<0.5	<0.5	<0.5	2	5 (1)	
Dichloroethane (1,2)				0	<0.5	<0.5	<0.5	2	5	
Dichloroethylene (1,1)				0	<0.5	<0.5	<0.5	2	14	
Ethylbenzene				0	<0.50	<0.50	<0.50	2	140 (1.6)	
Methylene Chloride				0	<0.5	<0.5	<0.5	2	50	
Tetrachloroethylene				0	<0.5	<0.5	<0.5	2	10	
Toluene				0	<0.50	<0.50	<0.50	2	60 (24)	
Total Xylenes				0	<1	<1	<1	2	90	
Trichloroethylene				0	<0.50	<0.50	<0.50	2	5	
Vinyl Chloride				0	<1.0	<1.0	<1.0	2	2	

2.2.19 Thorncliff Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Inorganics (mg/L) * **										
Alkalinity Total				0	124	118	129	2		
Aluminum				0	0.064	0.027	0.101	2	2.9	0.1/0.2
Beryllium				0	<0.0002	<0.0002	<0.0002	2		
Bromide Dissolved				0	<0.010	<0.010	<0.010	2		
Calcium				0	48.7	46.9	50.4	2		
Calcium Hardness				0	122	116	128	2		
Chloride Dissolved				0	6.1	6.0	6.1	2	(250)	
Cobalt				0	<0.0002	<0.0002	<0.0002	2		
Iron				0	<0.005	<0.005	<0.005	2	(0.3)	0.3
Lanthanum				0	<0.0010	<0.0010	<0.0010	2		
Lithium				0	0.0033	0.0030	0.0036	2		
Magnesium				0	14.5	14.2	14.7	2		
Molybdenum				0	0.0008	0.0006	0.0009	2		
Nickel				0	<0.0005	<0.0005	<0.0005	2		
Ortho_P	0.90	0.90	0.90	2	0.90	0.88	0.92	9		
Phosphorus				0	0.95	0.93	0.96	2		
Potassium				0	0.75	0.70	0.80	2		
Silicon				0	2.03	1.95	2.10	2		
Silver				0	<0.0001	<Inoff	<0.0002	2		
Sodium				0	9.7	7.3	12.0	2	(200)	
Sulphate Dissolved				0	69	60	78	2	(500)	
Thallium				0	<0.0004	<0.0002	<0.0005	2		
Tin				0	<0.0005	<0.0005	<0.0005	2		
Titanium				0	<0.0005	<0.0005	<0.0005	2		
Total Hardness (mg/L CaCO3)				0	182	174	189	2		
Vanadium				0	<0.0005	<0.0005	<0.0005	2		
Zinc				0	<0.005	<0.005	<0.005	2	(5.0)	
Zirconium				0	<0.0010	<0.0010	<0.0010	2		

2.2.19 Thorncliff Reservoir

April 2024

Parameter	Monthly				YTD				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	*Approval or GCDWQ MAC, (AO or OG)	EPCOR
Secondary Organics (ug/L) * **										
Bromodichloromethane				0	0.9	0.8	0.9	2		16
Bromoform				0	<0.5	<0.5	<0.5	2		
Chloroform				0	14.6	10.9	18.2	2		
Dibromochloromethane				0	<0.50	<0.50	<0.50	2		
Dichlorobenzene (1,3)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, cis (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloroethylene, trans (1,2)				0	<0.50	<0.50	<0.50	2		
Dichloropropane (1,2)				0	<0.5	<0.5	<0.5	2		
Methyl t-Butyl Ether (MTBE)				0	<0.5	<0.5	<0.5	2	(15)	
MIBK				0	<1.0	<1.0	<1.0	2		
Styrene				0	<0.50	<0.50	<0.50	2		
Tetrachloroethane (1,1,2,2)				0	<0.5	<0.5	<0.5	2		
Total Organic Carbon				0	1.3	1.2	1.3	2		
Total Volatile Organics (NonTHM)				0	1.4	<1.0	1.8	2		
Total Volatile Organics (Unknown)				0	1.2	1.2	1.2	1		
Trichlorobenzene (1,2,4)				0	<0.5	<0.5	<0.5	2		
Trichloroethane (1,1,1)				0	<0.5	<0.5	<0.5	2		
Xylene (1,2)				0	<0.5	<0.5	<0.5	2		
Xylene (1,4)				0	<0.5	<0.5	<0.5	2		

TABLE EXPLANATIONS:

* Numbers with no brackets are Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and/or a limit set out in the Alberta Environment and Parks (AEP) Operating Approval 638-04-00. Limits in brackets indicate Aesthetic Objectives or Operational Guidelines (OG) and are not Approval Limits The EPCOR limits are internal limits set by EPCOR in the Operations Program.

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*** Secondary parameters do not have health-based limits but may have aesthetic or operational objectives

2.2.20 Routine Distribution System, Field Reservoirs, Fire stations and Staff Residences
Disinfection Byproducts, THM, HAA, NDMA

April 2024

Parameter or Location	Monthly				YTD				12 months running				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
Trihalomethanes (ug/L)													100	50
01-SR				0	15.1	15.1	15.1	1	19.9	15.1	24.6	2		
02-SR				0	20.0	20.0	20.0	1	22.8	20.0	28.3	3		
03-SR				0				0	23.0	19.0	27.0	2		
04-SR				0	15.8	15.8	15.8	1	18.9	14.9	25.9	3		
05-RI				0				0	24.9	21.2	28.5	2		
07-RI	9.7	9.7	9.7	1	13.5	9.7	17.3	2	13.2	9.7	17.3	3		
07-SR	10.7	10.7	10.7	1	10.7	10.7	10.7	1	20.7	10.7	30.5	3		
10-SR				0				0	19.8	19.8	19.8	1		
11-SR				0				0	25.8	25.8	25.8	1		
14-RI				0				0	27.4	21.6	33.1	2		
15-SR				0				0	21.0	11.4	28.9	4		
19-SR				0				0	26.8	26.8	26.8	1		
21-SR				0				0	16.5	13.9	20.7	3		
24-SR				0	13.3	13.3	13.3	1	13.3	13.3	13.3	1		
26-DE				0				0	19.7	15.8	25.3	3		
27-SR				0				0	17.5	17.5	17.5	1		
28-SR				0				0	22.0	21.6	22.3	2		
30-SR	8.6	8.6	8.6	1	8.6	8.6	8.6	1	8.6	8.6	8.6	1		
31-DE				0	14.5	13.0	15.9	2	19.1	13.0	26.8	5		
31-RI				0	21.6	21.6	21.6	1	24.4	21.6	26.8	3		
32-SR				0	12.0	12.0	12.0	1	22.7	12.0	30.8	6		
36-DE				0				0	27.4	24.2	30.6	2		
40-SR	9.1	9.1	9.1	1	12.7	9.1	16.4	3	19.4	9.1	30.2	8		
41-DE				0				0	22.1	22.1	22.1	1		
41-SR	9.6	9.6	9.6	1	9.6	9.6	9.6	1	9.6	9.6	9.6	1		
EDMONTON S4				0	13.0	13.0	13.0	1	13.0	13.0	13.0	1		
	Total Count			5				17				65		

2.2.20 Routine Distribution System, Field Reservoirs, Fire stations and Staff Residences
Disinfection Byproducts, THM, HAA, NDMA

April 2024

Parameter or Location	Monthly				YTD				12 months running				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
HAA (ug/L)													80	40
				0	15.7	13.9	19.0	6	15.7	13.9	19.0	6		
01-SR				0	16.8	16.8	16.8	1	21.0	16.8	25.2	2		
02-SR				0	19.8	19.8	19.8	1	23.6	19.8	25.6	3		
03-SR				0				0	23.3	19.6	27.0	2		
04-SR				0	19.1	19.1	19.1	1	20.8	19.1	23.9	3		
05-RI				0				0	24.4	22.4	26.4	2		
07-RI	14.2	14.2	14.2	1	16.6	14.2	19.0	2	16.2	14.2	19.0	3		
07-SR	12.9	12.9	12.9	1	12.9	12.9	12.9	1	24.1	12.9	34.9	3		
10-SR				0				0	21.5	21.5	21.5	1		
11-SR				0				0	25.2	25.2	25.2	1		
14-RI				0				0	26.7	22.5	30.9	2		
15-SR				0				0	23.4	14.2	34.6	4		
19-SR				0				0	26.1	26.1	26.1	1		
21-SR				0				0	18.9	16.8	21.1	3		
24-SR				0	14.0	14.0	14.0	1	14.0	14.0	14.0	1		
26-DE				0				0	20.8	17.7	22.9	3		
27-SR				0				0	18.0	18.0	18.0	1		
28-SR				0				0	23.9	23.0	24.8	2		
30-SR	11.3	11.3	11.3	1	11.3	11.3	11.3	1	11.3	11.3	11.3	1		
31-DE				0	17.6	14.7	20.5	2	19.5	13.4	25.0	5		
31-RI				0	19.2	19.2	19.2	1	22.6	19.2	24.9	3		
32-SR				0	18.4	18.4	18.4	1	24.3	18.4	31.0	6		
36-DE				0				0	26.8	23.8	29.7	2		
40-SR	12.0	12.0	12.0	1	14.8	12.0	18.7	3	20.0	12.0	26.4	7		
41-DE				0				0	23.8	23.8	23.8	1		
41-SR	12.6	12.6	12.6	1	12.6	12.6	12.6	1	12.6	12.6	12.6	1		
EDMONTON S4				0	15.7	15.7	15.7	1	15.7	15.7	15.7	1		
	Total Count			5				23				70		

2.2.20 Routine Distribution System, Field Reservoirs, Fire stations and Staff Residences
Disinfection Byproducts, THM, HAA, NDMA

April 2024

Parameter or Location	Monthly				YTD				12 months running				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
NDMA (ug/L)													0.040	0.01
				0	0.001	0.001	0.001	3	0.001	0.001	0.001	3		
02-SR				0				0	0.002	0.002	0.002	1		
03-SR				0				0	0.003	0.002	0.004	2		
04-SR				0	<0.006	<0.006	<0.006	1	<0.006	<0.006	<0.006	1		
05-RI				0				0	0.004	0.004	0.004	1		
07-RI	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1		
07-SR	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	1	0.004	<0.002	0.005	2		
15-SR				0				0	0.001	<0.001	0.002	2		
20-OF				0				0	<0.002	<0.002	<0.002	1		
21-SR				0				0	<0.002	<0.001	0.002	2		
24-SR				0	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1		
26-DE				0				0	<0.002	<0.001	<0.002	3		
31-DE				0	<0.006	<0.006	<0.006	1	<0.006	<0.002	0.011	3		
31-RI				0	0.007	0.007	0.007	1	0.008	0.007	0.010	2		
32-SR				0				0	0.002	0.002	0.002	1		
36-DE				0				0	0.002	<0.001	0.002	2		
40-SR	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.006	2	<0.003	<0.002	<0.006	6		
41-DE				0				0	0.002	0.002	0.002	1		
EDMONTON S4				0	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1		
		Total Count		3				12				36		

2.2.20 Routine Distribution System, Field Reservoirs, Fire stations and Staff Residences
Disinfection Byproducts, THM, HAA, NDMA

April 2024

Parameter or Location	Monthly				YTD				12 months running				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
Trihalomethanes (ug/L)													100	50
Castledowns Reservoir	7.8	7.8	7.8	1	13.8	7.8	19.8	2	19.1	7.8	28.8	6		
Clareview Reservoir				0	17.8	15.4	20.1	2	22.5	13.3	33.5	6		
Discovery Park Reservoir				0	15.6	13.1	18.1	2	17.4	6.8	29.8	7		
Kaskitayo Reservoir				0	12.6	10.8	14.4	2	20.0	10.8	29.9	7		
Londonderry Reservoir	9.8	9.8	9.8	1	12.9	9.8	16.0	2	20.2	9.8	29.2	6		
Millwoods Reservoir	7.8	7.8	7.8	1	9.5	7.8	11.1	3	17.0	7.8	28.8	7		
North Jasper Place Reservoir				0	16.7	14.0	19.4	2	21.1	8.7	35.7	6		
Ormsby Reservoir	7.7	7.7	7.7	1	9.6	7.7	11.4	3	17.4	7.7	30.1	7		
Papaschase Reservoir 1	8.8	8.8	8.8	1	11.5	8.8	13.9	3	19.8	8.8	32.9	8		
Papaschase Reservoir 2				0	13.9	11.0	16.8	2	20.1	10.9	33.1	6		
Rosslyn Reservoir 1	10.0	10.0	10.0	1	12.8	10.0	15.5	2	22.1	10.0	30.0	7		
Rosslyn Reservoir 2				0	18.1	16.1	20.1	2	22.9	9.4	32.6	7		
Thorncliff Reservoir				0	15.7	12.2	19.1	2	20.0	8.2	31.6	6		
		Total Count		6				29				86		

2.2.20 Routine Distribution System, Field Reservoirs, Fire stations and Staff Residences
Disinfection Byproducts, THM, HAA, NDMA

April 2024

Parameter or Location	Monthly				YTD				12 months running				Limits	
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	GCDWQ or Approval or MAC* or (AO or OG) 12 month running	EPCOR single result
				0	13.9	12.5	17.1	6	13.9	12.5	17.1	6		
		Total Count		0				6				6		

Location Code: City is divided into 28 zones by population. Location is coded by zone and site type.

DE - Dead End
FS - Firestation
KT - Key Tap
OF - Other Facilities (stores / Restaurant)
PF - Plant First Customer (Guardhouse)
PR - Private Residence (Non-Staff)
RI - Regional Influent

2.2.21 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

April 2024

	Current Month								YTD							
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH			
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count
Microbiologicals																
Microcystin				0				0	<0.2	<0.2	<0.2	1	<0.2	<0.2	<0.2	1
Physical																
Colour (TCU)	7.9	5.5	13.1	30	7.9	5.9	13.7	30	9.6	5.2	43.8	120	9.8	4.7	43.6	120
Conductivity (uS/cm)	335	311	354	5	328	311	350	5	363	311	415	18	356	311	416	18
FPA-Intensity (N/A)	0.80	0.50	1.12	5	0.95	0.69	1.25	5	1.00	0.38	2.38	27	1.04	0.44	2.25	27
pH (N/A)	8.2	8.2	8.2	1	8.2	8.2	8.2	1	8.1	8.1	8.2	4	8.2	8.1	8.2	4
Total Dissolved Solids (mg/L)	208	208	208	1	201	201	201	1	217	208	231	4	219	201	240	4
Total Suspended Solids	6.6	6.6	6.6	1	3.1	3.1	3.1	1	3.5	<2.5	6.6	4	<2.7	<2.5	3.1	4
Turbidity (NTU)	28	2	367	30	23	2	224	30	9	1	367	120	7	1	224	120
Primary Inorganics (mg/L) **																
Antimony	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0003	<0.0002	<0.0005	4	<0.0003	<0.0002	<0.0005	4
Arsenic	0.0003	0.0003	0.0003	1	0.0002	0.0002	0.0002	1	0.0002	0.0002	0.0003	4	0.0002	0.0002	0.0003	4
Barium	0.058	0.058	0.058	1	0.057	0.057	0.057	1	0.063	0.058	0.070	4	0.063	0.057	0.070	4
Boron	0.009	0.009	0.009	1	0.008	0.008	0.008	1	0.010	0.009	0.010	4	0.010	0.008	0.010	4
Cadmium	<0.00000	<0.00002	<0.00000	1	<0.00000	<0.00002	<0.00000	1	<0.00020	<0.00002	<0.00020	4	<0.00020	<0.00002	<0.00020	4
Chromium	0.0003	0.0003	0.0003	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	0.0003	4	<0.0002	<0.0002	<0.0002	4
Copper	<0.002	<0.002	<0.002	1	<0.002	<0.002	<0.002	1	<0.004	<0.002	<0.005	4	<0.004	<0.002	<0.005	4
Fluoride	0.09	0.08	0.10	5	0.09	0.08	0.10	5	0.11	0.08	0.13	18	0.11	0.08	0.12	18
Lead	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4
Manganese	0.009	0.009	0.009	1	0.004	0.004	0.004	1	0.004	<0.002	0.009	4	0.004	0.003	0.005	4
Mercury	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0001	<0.0002	5	<0.0002	<0.0001	<0.0002	5
Nitrate (as N) Dissolved	0.05	0.01	0.08	5	0.04	0.01	0.07	5	0.09	0.01	0.16	18	0.07	0.01	0.14	18
Nitrite (as N) Dissolved	<0.01	<0.01	<0.01	5	<0.01	<0.01	<0.01	5	<0.01	<0.01	<0.01	18	<0.01	<0.01	<0.01	18
Selenium	0.0002	0.0002	0.0002	1	0.0002	0.0002	0.0002	1	0.0003	0.0002	0.0003	4	0.0003	<0.0002	0.0003	4
Total Chlorine	<0.03	<0.03	<0.03	1	<0.03	<0.03	<0.03	1	<0.03	<0.03	<0.03	4	<0.03	<0.03	<0.03	4
Uranium	0.0006	0.0006	0.0006	1	0.0005	0.0005	0.0005	1	0.0006	0.0005	0.0006	4	<0.0006	<0.0005	0.0006	4

2.2.21 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

April 2024

	Current Month								YTD							
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH			
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count
Primary Organics (ug/L) **																
2,4-D				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Atrazine				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Benzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Benzo(a)pyrene				0				0	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	1
Bromoxynil				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Carbon Tetrachloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121
Chlorobenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Chlorpyrifos				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Cyanazine				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Diazinon				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1
Dicamba				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Dichlorobenzene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichlorobenzene (1,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichloroethane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	120	<0.5	<0.5	<0.5	120
Dichloroethylene (1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<3.0	121	<0.5	<0.5	<3.0	121
Dichlorophenol (2,4)				0				0	<0.3	<0.3	<0.3	1	<0.3	<0.3	<0.3	1
Diclofop-methyl				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Dimethoate				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Diuron				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Ethylbenzene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Glyphosate				0				0	<0.2	<0.2	<0.2	1	<0.2	<0.2	<0.2	1
Malathion				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1
MCPA				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Methylene Chloride	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Metolachlor				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1
Metribuzin				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
NDMA (µg/L)				0				0	<0.0009	<0.0009	<0.0009	1	<0.00100	<0.00099	<0.00100	1
Nitrilotriacetic acid				0				0	<0.4000	<0.400000	<0.40	1	<0.40	<0.40	<0.40	1
Pentachlorophenol				0				0	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	1
Perfluorooctane sulfonic acid (PFOS)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Perfluorooctanoic acid (PFOA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Phorate				0				0	<0.25	<0.25	<0.25	1	<0.25	<0.25	<0.25	1
Picloram				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Simazine				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Terbufos				0				0	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	1
Tetrachloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Toluene	<0.6	<0.5	1.7	30	0.7	<0.5	2.9	30	<0.5	<0.5	1.7	121	<0.6	<0.5	2.9	121
Total Xylenes	<1.0	<1.0	<1.0	30	<1.0	<1.0	<1.0	30	<1.0	<1.0	<2.5	121	<1.0	<1.0	<2.5	121
Trichloroethylene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Trifluralin				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1

2.2.21 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

April 2024

	Current Month								YTD							
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH			
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count
Primary Organics (ug/L) **																
Trihalomethanes	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	121	<1	<1	<1	121
Vinyl Chloride	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	120	<1	<1	<1	120
Secondary Inorganics (mg/L) ***																
Alkalinity Total	120	118	128	5	118	112	128	5	128	117	149	18	127	112	151	18
Alkalinity, PHP (mg CaCO3/L)	<3	<3	<3	1	<3	<3	<3	1	<3	<3	<3	4	<3	<3	<3	4
Aluminum	0.244	0.244	0.244	1	0.105	0.105	0.105	1	0.158	0.108	0.244	4	0.106	0.078	0.132	4
Ammonia as NH3	<0.05	<0.05	<0.05	6	<0.05	<0.05	<0.05	6	<0.06	<0.05	0.09	29	<0.06	<0.05	0.14	29
Beryllium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4
Calcium Hardness	109	104	113	5	106	100	111	5	118	102	138	18	116	99	140	18
Cobalt	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	4	<0.0002	<0.0002	<0.0002	4
Free Chlorine	<0.07	<0.07	<0.07	1	<0.07	<0.07	<0.07	1	<0.07	<0.07	<0.07	4	<0.07	<0.07	<0.07	4
Iron	0.209	0.209	0.209	1	0.127	0.127	0.127	1	0.103	0.051	0.209	4	0.105	0.075	0.127	4
Lanthanum	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	4	<0.001	<0.001	<0.001	4
Lithium	0.0037	0.0037	0.0037	1	0.0033	0.0033	0.0033	1	0.0035	0.0033	0.0038	4	0.0034	0.0033	0.0038	4
Magnesium	13.4	13.4	13.4	1	13.4	13.4	13.4	1	14.5	13.4	15.4	4	14.5	13.4	15.3	4
Molybdenum	0.0007	0.0007	0.0007	1	0.0008	0.0008	0.0008	1	0.0009	0.0007	0.0010	4	0.0009	0.0008	0.0010	4
Nickel	0.0007	0.0007	0.0007	1	<0.0005	<0.0005	<0.0005	1	0.0006	0.0005	0.0007	4	<0.0005	<0.0005	0.0006	4
Ortho_P	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	5	<0.02	<0.02	<0.02	5
Phosphorus	0.03	0.03	0.03	1	0.02	0.02	0.02	1	<0.02	<0.02	0.03	4	<0.02	<0.02	0.02	4
Potassium	1.1	1.1	1.1	1	1.0	1.0	1.0	1	0.9	0.7	1.1	4	0.8	0.7	1.0	4
Silicon	1.99	1.99	1.99	1	1.74	1.74	1.74	1	2.15	1.99	2.38	4	2.08	1.74	2.45	4
Silver	<0.00000	<0.00002	<0.00000	1	<0.00000	<0.00002	<0.00000	1	<0.00020	<0.00002	<0.00020	4	<0.00020	<0.00002	<0.00020	4
Sodium	4.9	4.9	4.9	1	4.0	4.0	4.0	1	4.4	3.8	4.9	4	4.1	3.8	4.4	4
Strontium	0.469	0.469	0.469	1	0.471	0.471	0.471	1	0.467	0.429	0.499	4	0.466	0.425	0.504	4
Thallium	<0.0002	<0.0002	<0.0002	1	<0.0002	<0.0002	<0.0002	1	<0.0004	<0.0002	<0.0005	4	<0.0004	<0.0002	<0.0005	4
Tin	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	<0.0005	4	<0.0005	<0.0005	<0.0005	4
Titanium	0.0049	0.0049	0.0049	1	0.0020	0.0020	0.0020	1	0.0027	0.0015	0.0049	4	0.0023	0.0017	0.0033	4
Total Hardness (mg/L CaCO3)	162	154	168	5	163	156	172	5	177	153	211	18	177	155	203	18
Total Kjeldahl Nitrogen	0.2	0.2	0.2	1	0.2	0.2	0.2	1	0.2	0.1	0.2	4	0.2	<0.1	0.2	4
Total Kjeldahl Nitrogen (TKN)	0.2	0.2	0.2	5	0.2	0.1	0.2	5	0.3	<0.1	1.0	26	0.6	<0.1	9.4	27
Vanadium	0.0005	0.0005	0.0005	1	<0.0005	<0.0005	<0.0005	1	<0.0005	<0.0005	0.0006	4	<0.0005	<0.0005	<0.0005	4
Zinc	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	1	<0.005	<0.005	<0.005	4	<0.005	<0.005	<0.005	4
Zirconium	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	1	<0.001	<0.001	<0.001	4	<0.001	<0.001	<0.001	4

2.2.21 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

April 2024

	Current Month								YTD							
	ROSSDALE				E.L. SMITH				ROSSDALE				E.L. SMITH			
	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count	Mean	Min	Max	Count
Secondary Organics (ug/L) ***																
Aldicarb				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Aldrin				0				0	<0.008	<0.008	<0.008	1	<0.008	<0.008	<0.008	1
Azinphos-methyl				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Bromodichloromethane	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Bromoform	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121
Carbaryl				0				0	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	1
Carbofuran				0				0	<0.025	<0.025	<0.025	1	<0.025	<0.025	<0.025	1
Chloroform	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dibromochloromethane	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichlorobenzene (1,3)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichloroethylene, cis (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichloroethylene, trans (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dichloropropane (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Dieldrin				0				0	<0.008	<0.008	<0.008	1	<0.008	<0.008	<0.008	1
Methyl t-Butyl Ether (MTBE)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
MIBK	<1	<1	<1	30	<1	<1	<1	30	<1	<1	<1	121	<1	<1	<1	121
Parathion				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Perfluorobutanoic acid (PFBA)				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Perfluoroheptanoic acid (PFHpA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Perfluorohexane sulfonic acid (PFHxS)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Perfluorohexanoic acid (PFHxA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Perfluorononanoic acid (PFNA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Perfluoropentanoic acid (PFPeA)				0				0	<0.02	<0.02	<0.02	1	<0.02	<0.02	<0.02	1
Styrene	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Tetrachloroethane (1,1,2,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<1.0	121	<0.5	<0.5	<1.0	121
Total Organic Carbon	2.0	1.6	2.5	5	1.9	1.5	2.2	5	2.2	1.1	5.4	18	2.2	1.2	5.9	18
Total Volatile Organics (NonTHM)	1.4	<1.0	3.6	30	1.5	<1.0	5.6	30	<1.2	<1.0	3.6	121	<1.3	<1.0	5.6	121
Total Volatile Organics (Unknown)				0				0	<0.8	<0.5	1.0	20	<0.6	<0.5	1.1	26
Triallate				0				0	<0.1	<0.1	<0.1	1	<0.1	<0.1	<0.1	1
Trichloroacetic acid				0				0	<1	<1	<1	1	<1	<1	<1	1
Trichlorobenzene (1,2,4)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Trichloroethane (1,1,1)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Xylene (1,2)	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	30	<0.5	<0.5	<0.5	121	<0.5	<0.5	<0.5	121
Xylene (1,4)	<0.5	<0.5	0.6	30	<0.5	<0.5	0.9	30	<0.5	<0.5	0.6	121	<0.5	<0.5	0.9	121

2.2.22 EFFLUENT WASTESTREAM TO SANITARY SEWER (PLANTS) - REGULATED (EPCOR Drainage Bylaw)

(Lab Neutralization Tank in Water Excellence Lab Building)

Date	pH**
05-Apr-2024	7.4
12-Apr-2024	7.58
17-Apr-2024	7.95
25-Apr-2024	7.24

**Drainage By-Law 18093 Acceptable Range is 6.0 to 11.5

2.2.23 REPORTABLE DETECTION LIMITS

Analyte	RDL	Unit
Ammonia as N	0.05	mg/L
Ammonia as NH3	0.05	mg/L
Benzene	0.5	µg/L
Bromate Dissolved	0.005	mg/L
Bromide Dissolved	0.01	mg/L
Bromodichloromethane	0.5	µg/L
Bromoform	0.5	µg/L
Carbon Tetrachloride	0.5	µg/L
Cellular ATP	0.1	pg/mL
Chlorate Dissolved	0.01	mg/L
Chloride Dissolved	0.1	mg/L
Chlorite Dissolved	0.005	mg/L
Chlorobenzene	0.5	µg/L
Chloroform	0.5	µg/L
Coliforms, total	1	PA/100mL
Dibromochloromethane	0.5	µg/L
Dichlorobenzene (1,2)	0.5	µg/L
Dichlorobenzene (1,3)	0.5	µg/L
Dichlorobenzene (1,4)	0.5	µg/L
Dichloroethane (1,2)	0.5	µg/L
Dichloroethylene (1,1)	0.5	µg/L
Dichloroethylene, cis (1,2)	0.5	µg/L
Dichloroethylene, trans (1,2)	0.5	µg/L
Dichloropropane (1,2)	0.5	µg/L
E. coli	1	PA/100mL
Ethylbenzene	0.5	µg/L
Methyl t-Butyl Ether (MTBE)	0.5	µg/L
Methylene Chloride	0.5	µg/L
MIBK	1.0	µg/L
Nitrate (as N) Dissolved	0.01	mg/L
Nitrite (as N) Dissolved	0.01	mg/L
Styrene	0.5	µg/L
Sulphate Dissolved	0.2	mg/L
Tetrachloroethane (1,1,2,2)	0.5	µg/L
Tetrachloroethylene	0.5	µg/L
Toluene	0.5	µg/L
Total Volatile Organics (NonTHM)	1.0	µg/L
Total Volatile Organics (Unknown)	0.5	µg/L
Total Xylenes	1.0	µg/L
Trichlorobenzene (1,2,4)	0.5	µg/L
Trichloroethane (1,1,1)	0.5	µg/L
Trichloroethylene	0.5	µg/L
Trihalomethanes	1.0	µg/L
Turbidity	0.04	NTU
Vinyl Chloride	1.0	µg/L
Xylene (1,2)	0.5	µg/L
Xylene (1,4)	0.5	µg/L

2.2.23 REPORTABLE DETECTION LIMITS

Analyte	RDL	Unit
Contract Lab Analysis		
Bromochloroacetic acid	1.00	ug/L
Dibromoacetic acid	1.00	ug/L
Dichloroacetic acid	1.00	ug/L
Haloacetic Acids, total (HAA5)	5.00	ug/L
Monobromoacetic acid	1.00	ug/L
Monochloroacetic acid	1.00	ug/L
NDMA	0.00090	µg/L
Trichloroacetic acid	1.00	ug/L

2.2.24 EXPLANATION OF NOTATIONS USED

Concentrations are reported as mg/L unless otherwise indicated.
Alkalinity and Hardness (Ca and Total) are reported as mg $CaCO_3$/L

%T	=	% Transmission
- ve	=	Absent
+ ve	=	Present
µg/L	=	Micrograms per litre (1 µg/L = 0.001 mg/L)
µS/cm	=	Microsiemens per centimeter (unit of conductivity)
2/Y	=	Twice per Year
AO	=	Aesthetic Objective
Bq/L	=	Becquerel(s) per litre (unit of radionuclide concentration)
CCPP	=	Calcium Carbonate Precipitation Potential
CFU	=	Colony Forming Units
Comm	=	Commercial Laboratories
D	=	Daily
EWSI	=	EPCOR Water Services Inc.
FPA	=	Flavour Profile Analysis
GCDWQ	=	Guidelines for Canadian Drinking Water Quality
GM	=	Geometric Mean
HPC	=	Heterotrophic Plate Count
inoff	=	Inoffensive (no objectionable odour)
M	=	Monthly
MAC	=	Maximum Acceptable Concentration
MDL	=	Method Detection Limit
N/A	=	Not Available
ND	=	Not Detected
NTU	=	Nephelometric Turbidity Units
PA	=	Presence/Absence Testing
PBR	=	Performance Based Rates
PHP	=	phenolphthalein
PLPH	=	Provincial Laboratory of Public Health
ppb	=	Parts Per Billion
ppm	=	Parts Per Million
Q	=	Quarterly
QA	=	Quality Assurance
QC	=	Quality Control
RDL	=	Reportable Detection Limit
TCU	=	True Colour Units
TDS	=	Total Dissolved Solids
TOC	=	Total Organic Carbon
WL	=	Water Laboratory
WTP	=	Water Treatment Plant