The Regional Municipality of Halton

Analytical Averages of Distribution System Water - 2017

Schedule 1 - Microbiological Parameters

Analysis	Unit	MOECC MAC Standard	MOECC Aesthetic Objective	MOECC Operational Guideline	Detection Limit	Acton Dsitribution	Burlington Distribution	Campbellville Distribution	Georgetown Distribution	Milton Distribution Well Based	Milton Distribution Lake Based	Oakville Distribution	Bridgeview Distribution	North Aldershot Distribution	Snake Road Distribution
E. coli	CFU/100 mL	0			0	0	0	0	0	0	0	0	0	0	0
Total Coliform	CFU/100 mL	0			0	0	0	0	0	0	0	0	0	0	0
Total Coliform Bkg.	CFU/100 mL			200 [1]	0	0	0	2	3	1	1	0	3	0	0
Presence/Absence	P/A/100mL	Absent			NA	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Heterotrophic Plate Count	CFU/1 mL			500 [2]	0	1	3	0	1	1	1	5	1	1	1
Chlorine - Free	mg/L	0.05 - 4.0		0.2	0.01	1.07	0.93	1.02	1.15	1.07	1.12	1.05			
Chlorine - Total	mg/L				0.01	1.20	1.12	1.14	1.30	1.20	1.29	1.24	1.31	0.98	1.40
Chlorine - Combined	mg/L	0.25 - 3.0		1.0	0.01								1.23*	0.93*	1.33*

Table 4 - Chemical / Physical Parameters

Alkalinity	mg/L			30 - 500	2.0	264	90.8	295	267	243	92.6	91.0	87.4	88.0	89.6
Ammonia Nitrogen	mg/L				0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.22	<0.10	0.25
Calcium	mg/L				0.05/0.5	85.8	34.5	88.8	90.5	71.8	37.6	34.7	34.1	33.9	35.1
Chloride	mg/L		250		0.05/1.0	57.2	29.3	296	101	83.1	31.7	30.5	31.4	27.6	31.0
Colour	TCU		5		1	1	1	1	1	1	1	1	1	1	1
Conductivity	µS/cm				0.5	686	332	1510	871	757	342	337	339	341	338
Dissolved Organic Carbon	mg/L		5		0.20	1.4	1.6	1.0	0.84	0.97	1.6	1.6	1.7	1.7	1.8
LSI - Conductivity					NA	0.1	-0.4	0.2	0.3	0.2	-0.1	-0.4	-0.4	-0.3	-0.2
LSI - TDS					NA	0.1	-0.4	0.2	0.3	0.2	-0.1	-0.4	-0.4	-0.3	-0.2
Magnesium	mg/L				0.05	25.5	9.00	30.8	28.1	31.7	8.94	9.04	8.77	8.78	8.73
Organic Nitrogen	mg/L			0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	<0.1	<0.1	<0.1
pH				6.5 - 8.5	1.00	7.36	7.72	7.46	7.52	7.56	7.92	7.72	7.78	7.89	7.81
Potassium	mg/L				0.05	1.49	1.62	1.48	1.98	1.60	1.71	1.64	1.59	1.61	1.58
Sulphate	mg/L		500		0.10/10	22.5	25.9	27.0	42.8	34.1	25.5	25.9	24.2	25.5	24.6
TKN (Total Kjeldhal Nitrogen)	mg/L				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	<0.1	0.3
Total Dissolved Solids	mg/L		500		25	403	186	794	487	415	190	186	188	193	203
Total Hardness	mg/L			80 - 100	1.5	312	123	335	336	296	125	124	123	122	124
(for Dishwashers)	grains/gal					21.9	8.6	23.5	23.6	20.8	8.8	8.7	8.6	8.6	8.7
Aluminum	mg/L			0.1	0.001	0.001	0.059	0.001	0.001	0.003	0.060	0.071	0.114	0.093	0.091
Cobalt	mg/L				0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	mg/L		1		0.001	0.053	0.008	0.019	0.008	0.013	0.004	0.004	0.013	<0.001	0.010
Iron	mg/L		0.3		0.001	0.003	0.006	0.014	0.004	0.002	0.003	0.003	0.028	0.002	0.030
Manganese	mg/L		0.05		0.0005	<0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	<0.0005	0.0006
Molybdenum	mg/L				0.0005	0.0008	0.0014	0.0005	0.0005	0.0010	0.0013	0.0013	0.0011	0.0015	0.0011
Nickel	mg/L				0.0005	0.0009	0.0010	0.0009	0.0008	0.0007	0.0009	0.0009	0.0006	0.0005	0.0006
Zinc	mg/L		5		0.0005	0.0200	0.0015	0.0043	0.0025	0.0014	0.0015	0.0013	0.0050	<0.0005	0.0012

Schedule 13 - Chemical Parameters

Fluoride	mg/L	1.5		0.5 - 0.8 [3]	0.03/0.02	0.66	0.62	0.07	0.65	0.09	0.62	0.57	0.62	0.67	0.61
Nitrate Nitrogen	mg/L	10			0.01/0.04	1.60	0.40	1.21	1.63	0.20	0.40	0.40	0.39	0.41	0.38
Nitrite Nitrogen	mg/L	1			0.02/0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.03	0.03
Sodium	mg/L	20 [4]	200 [5]		0.05/1.0	24.5	15.9	182	51.2	44.1	17.1	16.2	14.7	14.7	14.7
Turbidity	NTU	1 [6]	5 [7]		0.05	0.09	0.09	0.15	0.24	0.25	0.10	0.10	0.18	0.18	0.38
Bromodichloromethane [9]	µg/L				0.10	6.0	7.7	4.3	5.7	7.1	10.8	7.4	8.6	8.7	7.2
Bromoform [9]	µg/L				0.20	0.4	0.6	1.1	3.0	5.6	0.9	0.6	0.4	0.4	0.3
Chloroform [9]	µg/L				0.10	12.4	13.0	4.0	2.7	2.8	18.5	10.2	10.4	11.9	8.5
Dibromochloromethane [9]	µg/L				0.20	2.7	4.7	4.6	8.2	11.7	6.5	4.8	4.4	4.6	3.8
Total THMs	µg/L	100 [8]			0.20	19.2	27.4 [10]	14.7	20.6	28.7	27.4 [10]	27.4 [10]	21.9	23.2	19.0
Dibromoacetic Acid [9]	µg/L				5.0		<5.0				<5.0	<5.0			
Dichloroacetic Acid [9]	µg/L				5.0		6.2				10.5	6.0			
Monobromoacetic Acid [9]	µg/L				5.0		<5.0				<5.0	<5.0			
Monochloroacetic Acid [9]	µg/L				5.0		<5.0				<5.0	<5.0			
Trichloroacetic Acid [9]	µg/L				5.0		5.3				6.1	5.1			
Total HAAs	µg/L	80 [11]			5.0		8.2 [10]				8.2 [10]	8.2 [10]			

Schedule 23 - Inorganic Parameters

Cadmium	mg/L	0.005			0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	0.05			0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001

NOTES:

[1] This is an internal Halton Region guideline and is not reportable to the Ministry of the Environment and Climate Change (MOECC) if adverse.

[2] This is an internal Halton Region guideline and is not reportable to the MOECC if adverse. Increases in HPC concentrations above baseline levels are considered undesirable.

[3] This guideline applies only when Fluoride is added. Campbellville and well based Milton do not have Fluoride added to the water supply.

[4] Defined as adverse under Reg. 170/03. At 20 mg/L, the Medical Officer of Health is to be notified, who in turn notifies local physicians so that patients on sodium restricted diets can be informed.

[5] At 200 mg/L, MOECC Aesthetic Objective.

[6] This standard applies to treated water entering the distribution system.

[7] This objective applies to water in the distribution system.

[8] This standard applies to a running annual average for all distribution sites, as per MOECC calculation.

[9] This result is based on an annual average.

[10] This is a running average for the South Halton Water Distribution System (Oakville, Burlington, Milton Lake Based) as per MOECC calculation.

[11] This standard applies to a running annual average of all sites after chlorination or re-chlorination, as per MOECC calculation. The standard for HAA will come into effect January 1, 2020.

* This system operates under chloramination.

MAC = Maximum Acceptable Concentration

Schedule 23 and 24 from the Ontario Drinking Water Quality Standards Reg. 169/03 and 170/03 have been analyzed for all treated waters entering the distribution system, where required, and were found to be below the MAC health standard or aesthetic objective required.

To convert mg/L to grains/gallon: mg/L x 0.07016 = grains/imperial gallon