

Table 2. GNWT July 2020 Routine Water Quality Data compared to Historical GNWT and ECCC Water Quality Data

Lab Section	Parameter	Units	GNWT July 2020 Value	GNWT July Maximum Value 2011-2019*	GNWT Annual Maximum Value 2011-2019*	ECCC July Maximum Value 1988-2019*	ECCC Annual Maximum Value 1988-2019*
			Hay River near Alberta/NWT Border	Hay River near Alberta/NWT Border	Hay River near Alberta/NWT Border	Hay River near Alberta/NWT Border	Hay River near Alberta/NWT Border
Inorganics - Nutrients	Ammonia as Nitrogen	mg/L	0.014	0.05	0.075	0.099	0.938
	Nitrate+Nitrite as Nitrogen	mg/L	0.022	0.3	0.3	1.35	1.73
	Nitrogen, Dissolved	mg/L	0.96	0.99	1.1	0.97	3.4
	Organic Carbon, Dissolved	mg/L	32.4	30.1	31.1	38.7	72.2
	Organic Carbon, Total	mg/L	32.6	31.8	31.8	39	73.01
	Phosphorous, Dissolved	mg/L	0.036	0.022	0.022	0.07	0.447
	Phosphorous, Total	mg/L	0.353	0.188	0.188	0.32	0.76
	Inorganics - Physicals	Alkalinity, Total (as CaCO3)	mg/L	70	116	389	129
Conductivity, Specific		us/cm	283	379	434	400	860
pH		pH units	7.49	8.08	8.21	8.6	8.6
Solids, Total Dissolved		mg/L	323	295	296	708	2700
Solids, Total Suspended		mg/L	287	143	193	222	788
Turbidity		NTU	245	108	148	210	611
Major Ions	Calcium	mg/L	34.5	52.9	54.2	51.4	115
	Chloride	mg/L	1.96	3.8	4.2	6.9	24.4
	Hardness	mg/L	127	192	199	187	421
	Magnesium	mg/L	9.87	14.6	15.5	14.4	33
	Potassium	mg/L	1.47	2.3	3.4	2.78	4.79
	Sodium	mg/L	11.6	15.5	17.4	17.2	35.1
	Sulphate	mg/L	67.2	104	104	104	151
Trace Metals, Dissolved	Aluminum	ug/L	20	113	113	43.5	91.7
	Antimony	ug/L	0.2	0.2	0.4	0.172	0.28
	Arsenic	ug/L	0.8	1.1	1.1	1.12	8
	Barium	ug/L	45.2	102	102	54.1	95
	Beryllium	ug/L	0.1	0.1	0.1	0.016	0.023
	Bismuth	ug/L	0.2	1.1	1.1	0.004	0.007
	Boron	ug/L	30.2	45.1	45.1	36.9	61
	Cadmium	ug/L	0.04	0.05	0.07	0.059	0.186
	Chromium	ug/L	0.2	2.5	2.5	0.2	0.342

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	Cobalt	ug/L	0.2	0.2	0.5	0.2	2.2
	Copper	ug/L	2.8	6.6	6.6	3.25	5.55
	Iron	ug/L	244	805	805	642	3170
	Lead	ug/L	0.1	0.5	0.5	0.213	0.915
	Lithium	ug/L	9.6	14.2	17.1	14.6	30.7
	Manganese	ug/L	16.6	40.1	60.7	11.1	720
	Molybdenum	ug/L	1	1.5	1.5	1	1.43
	Nickel	ug/L	5	8.9	8.9	3.86	7.78
	Selenium	ug/L	<0.3	0.6	0.7	0.27	0.6
	Silver	ug/L	0.1	0.1	0.1	0.005	0.047
	Strontium	ug/L	110	151	154	157	325
	Thallium	ug/L	0.1	0.1	0.1	0.018	0.021
	Uranium	ug/L	0.4	0.6	0.8	0.58	2
	Vanadium	ug/L	0.3	0.8	0.8	0.53	0.687
	Zinc	ug/L	0.8	33.2	33.2	2.2	14.4
Trace Metals, Total	Aluminum	ug/L	5060	1980	4470	2200	7950
	Antimony	ug/L	0.5	0.2	0.5	0.167	0.27
	Arsenic	ug/L	6.6	2.9	3.3	2.26	5.92
	Barium	ug/L	181	100	132	312	312
	Beryllium	ug/L	0.4	0.2	0.2	0.16	0.562
	Bismuth	ug/L	0.2	1.9	1.9	0.023	0.06
	Boron	ug/L	42.4	52.7	52.7	46.5	66.2
	Cadmium	ug/L	0.3	0.3	0.3	1.57	2.56
	Chromium	ug/L	8.4	3.2	6.2	3.7	12.2
	Cobalt	ug/L	4.8	2.1	2.9	2.9	8.96
	Copper	ug/L	13.9	5.8	6.3	7.4	24.7
	Iron	ug/L	11200	4660	6150	6250	21800
	Lead	ug/L	6	2.4	3.2	4.7	11.3
	Lithium	ug/L	16.2	15.4	17.9	21	70.4
	Manganese	ug/L	205	151	192	485	1340
	Molybdenum	ug/L	1.8	1.7	1.7	1.9	1.9

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	Nickel	ug/L	16.5	8.4	8.6	10.5	27.3
	Selenium	ug/L	0.5	0.7	0.9	0.28	0.51
	Silver	ug/L	0.1	0.6	0.6	0.043	0.2
	Strontium	ug/L	133	157	211	162	346
	Thallium	ug/L	0.2	0.1	0.1	0.045	0.209
	Uranium	ug/L	1.2	0.8	1	0.988	2.14
	Vanadium	ug/L	19	7.3	14.5	7.8	24
	Zinc	ug/L	48.5	17.8	24.8	22.2	93.3
Trace Metals, Ultra Low	Mercury, Dissolved	ng/L	3.6	2.7	2.7	not monitored	not monitored
	Mercury, Total	ng/L	31.3	12.8	19.4	not monitored	not monitored

*Periods of record vary by parameter; < : the laboratory reported the value as less than the detection limit.