

Community: Gjoa Haven**Water Analysis 2017**

Parameters		GCDWQ			April 18, 2017			July 11, 2017		
	Units	Guideline	MAC	AO	Raw	Truckfill	WTP	Raw	Truckfill	WTP
Colour	TCU	2005		<=15				8	<5	5
pH		2015		7.0-10.5	7.64	7.81	7.64	8.04	8.04	7.94
Turbidity	NTU		1	<=5	0.25	0.39	0.23	0.53	0.49	0.4
TDS	mg/L	1991						219	228	209
TSS	mg/L				<3	3	<3	<3	<3	<3
Alkalinity	mg/L				154	154	153	99.7	98.5	98.8
Conductivity	µS/cm				718	713	716	480	491	487
Dissolve C	mg/L		45		4.9	4.9	4.7	3.8	3.8	3.4
Total C	mg/L				4.9	4.8	4.8	3.8	3.5	3.5
P, Total	mg/L									
Cyanide	mg/L	1991	0.2		<0.001	<0.001	<0.001			
THMs	mg/L	2006	0.1			0.005	0.116			
Phenol, Totl	mg/L				<0.001	0.001	<0.001			
Bromo-CH4	mg/L					0.005	0.05			
Nitrate N	mg/L				0.06	0.06	0.06	0.32	0.17	0.17
Hardness	mg/L				190	196	190	122	123	123
Chloride	mg/L			<=250	129	136	130	82.1	85.7	84.6
Fluoride	mg/L				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sodium	mg/L	1979		<=200	69.8	73	69.9	44.5	47.8	46.8
Sulphate	mg/L	1994		<=500	15	16	16	11	11	11
Magnesium	mg/L				26.4	27.3	26.4	17.1	17.1	17.2
Calcium	mg/L				32.6	33.6	32.7	20.9	21	21.1
Potasium	mg/L				3.5	3.7	3.5	2.3	2.3	2.3
Total Coli	CFU	2012	none		<1.0	<1.0	<1.0		<1	<1
E. Coli	CFU	2012	none		<1.0	<1.0	<1.0			
Aluminium	µg/L	1998	ND	<100	1.2	2.8	0.6	3.2	9.7	0.8
Arsenic	µg/L	2006	100	5	0.5	0.5	0.5	0.3	0.3	0.3
Barium	µg/L	1990	1000		<0.1	<0.1	<0.1	4.5	4.2	4.3
Cadmium	µg/L	2005	5		<0.05	<0.05	<0.05	<0.04	<0.04	0.04
Chromium	µg/L	1986	50		<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Copper	µg/L	1992	ND	<=1000	71.1	37.9	36.5	<0.2	18.9	72.3
Iron	µg/L	2005	ND	<=300	20	43	20	12	69	47
Lead	µg/L	1992	10		1.1	0.5	0.3	<0.1	0.4	0.4
Manganese	µg/L	1987	ND	<=50	1.3	3	2.4	5.7	4.7	3.2
Selenium	µg/L	2014	50		<0.3	<0.3		<0.3	<0.3	<0.3
Uranium	µg/L	1999	20							
Zinc	µg/L	2005	ND	<=5000	171	154	149	<0.4	99.1	88.7
Mercury	µg/L	1986	1		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	µg/L				0.4	0.3	0.3	<0.1	0.2	0.3

GCDWQ=Guidelines for Canadian Drinking Water Quality

IMAC=Interim maximum acceptable concentration

MAC=Maximum acceptable concentration, ND=Not defined

AO=Aesthetic Objectives,

Table

Effluent samples results 2017: Hamlet of Gjoa Haven, NU

Parameters	MAC Limit	units	July 11, 2017	July 11, 2017	July 11, 2017			
			GJO-3A	GJO-5	GJO-4			
Alkalinity		mg/L	341	349	189			
Conductivity		µS/cm	1180	2980	657			
p ^H	6-9		7.49	7.54	7.71			
TSS	100	mg/L	48		4			
BOD	80	mg/L	39	51	25			
CBOD	200	mg/L	133					
Organic C, Dissolve	80	mg/L	68.2	74	14.1			
Organic C, Total	100	mg/L	107	105	14.9			
Phosphorus, Total		mg/L	8.15	0.421	0.082			
Nitrate as N2		mg/L	0.35	0.33	3.44			
Nitrite as N2		mg/L	2.42	0.14	0.11			
Calcium		mg/L	20.8	413	35.1			
Chloride	250	mg/L	127	158	62.7			
Hardness (CaCO ₃)	500	mg/L	124	1360	182			
Magnesium		mg/L	17.6	80.1	23			
Potassium		mg/L	22.6	51.9	6.3			
Sodium	200	mg/L	87.7	165	62.2			
Sulphate	500	mg/L	12	1100	33			
Fecal Coliform	10 ⁴	CFU/100mL	124	<1	<1			
Oil and Grease	5000	µg/L	None	None	None			
Aluminium	1000	µg/L	80.5	104	10.8			
Arsenic	1000	µg/L	0.8	7.3	1.4			
Cadmium	100	µg/L	<0.1	1.8	<0.04			
Chromium	100	µg/L	0.6	2.0	0.2			
Cobalt	50	µg/L	0.4	8.9	1.0			
Copper	200	µg/L	73.6	412	5.9			
Iron	1000	µg/L	315	23900	68			
Lead	50	µg/L	0.7	48.3	0.1			
Manganese	50	µg/L	24.5	1500	13.2			
Nickel	200	µg/L	1.8	30.6	4.8			
Zinc	500	µg/L	84.6	954	4.5			
Mercury (Hg)	0.6	µg/L	<0.01	0.28	<0.01			

Parameters MAC value for **sewage effluent** identified in the Water Licence.

- **Red** fonts shows higher parameter values that requires more holding time before decanting/ discharge
- **blue** fonts shows values within allowable limit and ready for discharge the effluent water

Note: GJO-4 is Final Discharge point (end-of-pipe), and GJO-5 inside the Solid waste facility where effluent dries naturally, no decanting or discharge required. GJO-3A is at sewage Lagoon.