Government of the
Northwest Territories

DRINKING WATER PRIMER 2020

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Drinking water in the Northwest Territories (NWT) goes through a number of treatment steps and tests to ensure that it is safe and of good quality. Community governments, the Government of the Northwest Territories (GNWT), and the regulatory boards all play a role in ensuring that drinking water meets the requirements of the Water Supply System Regulations within the *NWT Public Health Act*. The *NWT Public Health Act* adopts the *Guidelines for Canadian Drinking Water Quality*, which are developed by the Federal-Provincial-Territorial Committee on Drinking Water, as the standard for treatment and sampling.

In the NWT, a multi-barrier approach is used to ensure drinking water safety. This approach includes source water protection, treatment processes such as filtration and disinfection, and regular sampling to verify that treatment is working properly. Community governments have primary responsibility for providing safe drinking water. Community governments are responsible for ensuring that trained staff treat and monitor the water on a daily basis. Various GNWT departments provide support, training, certification, operational funding, monitoring, and enforcement to support delivery of drinking water services.

Certified operators carry out the day-to-day operation of NWT water treatment plants. These operators have attended courses and passed an exam based on the level of complexity of the plant they operate. They are also required to maintain their certification with ongoing training and education. Operators are responsible for maintaining and cleaning their water plant, making adjustments to chemical dosages, and carrying out routine testing and monitoring for chlorine, turbidity, bacteriological quality. The results of all testing, along with the plant log sheets, are subject to review by the Environmental Health Officers at the GNWT Department of Health and Social Services. An additional suite of samples is taken annually to test for 28 chemical and physical parameters, such as pH, metals, dissolved and total solids, and color.

The challenges of navigating through the COVID-19 pandemic were not easy, including for NWT community governments. Logistical issues as well as personnel issues affected the delivery and testing of water throughout the NWT. Although some reporting targets were missed, this does not mean that the water was unsafe to drink, but it does demonstrate that community governments had some external challenges brought on by the pandemic. Be it not having a backup crew or not being able to transport samples due to local travel restrictions, the past year was a challenge for all, including community government works staff who worked day in and day out to ensure all residents had access to a safe, clean supply of drinking water. With the easing of restrictions, it is anticipated that sample reporting will improve for the next reporting period.

The GNWT department of Municipal and Community Affairs (MACA) has a website, **https://www.maca.gov.nt.ca/en/services/drinking-water-nwt**, which contains information for the public on the tests done on NWT drinking water, treatment processes, the roles and responsibilities of the communities and GNWT departments, and other frequently asked questions about drinking water. Questions or concerns about drinking water in a particular community should be directed to the water treatment plant operator in that community. If they cannot assist you, you can check for notices and announcements on the NWT Drinking water website.

2019-2020 Water Quality Summary - Table

Community	Plant Classification	Water Source	Water Treatment Process	Certified Operator	Treated Water Chemical Tests		Treated Water Bacteria Tests *(48 required, 252 for Yellowknife)*	
					2019	2020	2019	2020
Aklavik	Class II	Mackenzie River (Peel Channel)	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	50	22
Colville Lake	Small System	Colville Lake	Cartridge Filtration, Chlorination, Storage	×	✓	×	0	0
Délı̨ne	Small System	Great Bear Lake	Cartridge Filtration, UV, Chlorination, Storage	×	✓	×	90	39
Behchokǫ̀ (Edzo)	Class II	West Channel	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	227	0
Behchokǫ̀ (Rae)	Class II	Marian Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	183	0
Fort Good Hope	Class I	Mackenzie River	Membrane Filtration, Chlorination and Storage	×	✓	×	31	25
Fort Liard	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	✓	×	56	59
Fort McPherson	Class I	Deep Water Lake	Membrane Filtration, Activated Carbon Filtration, Chlorination and Storage	×	✓	✓	19	12
Fort Providence	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	×	✓	×	35	27
Fort Resolution	Class II	Great Slave Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	12	28
Fort Simpson	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	41	25
Fort Smith	Class III	Slave River	Upflow Clarifier, Filtration, Chlorination, Fluoridation, Storage	✓	✓	×	27	17
Gamètì	Class I	Rae Lake	Membrane Filtration, Chlorination, and Storage	✓	✓	✓	53	25
Hay River	Class II	Great Slave Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	114	69
Inuvik	Class III	Mackenzie River	Coagulation, Membrane Filtration , Chlorination, Fluoride, Storage	✓	✓	×	30	51
Jean Marie River	Class I	Mackenzie River	Membrane Filtration, Chlorination, and Storage	✓	×	×	34	5
Łutselk'e	Class I	Great Slave Lake	Membrane Filtration, Chlorination and Storage	✓	✓	×	28	38
Nahanni Butte	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	✓	×	138	42
Norman Wells	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	×	100	87
Paulatuk	Class I	New Water Lake	Membrane Filtration, Chlorination, and Storage	✓	✓	✓	23	7
Sachs Harbour	Small System	DOT Lake	Cartridge Filtration, Chlorination	×	✓	×	76	41
Sambaa K'e	Class I	Trout Lake	Membrane filtration, Chlorination and Storage	×	×	×	2	0
Tsiigehtchic	Class I	Tso Lake	Nano-Filtration, Chlorination and Storage	×	✓	×	64	39
Tuktoyaktuk	Class I	Kudlak Lake	Pressure Filtration, UV, Chlorination and Storage	✓	✓	×	55	37
Tulita	Class I	Great Bear River	Micro-Filtration, Chlorination and Storage	✓	×	×	50	25
Ulukhaktok	Small System	RCAF Lake	Pre-Filter, UV, Chlorination and Storage	✓	✓	×	40	31
Wekweètì	Class I	Snare Lake	Membrane Filtration, Chlorination, and Storage	×	✓	✓	55	21
Whatì	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	×	×	×	141	68
Wrigley	Class I	Mackenzie River	Membrane filtration, Chlorination and Storage	×	✓	×	46	21
Yellowknife	Class II	Yellowknife River	Membrane Filtration, Chlorination, Fluoridation, Storage	✓	✓	×	377[2]	240

**Boil Water Advisory* *meets Requirements* *Does not meet Requirements*

[1]HSS Staff works with communities that submit less than the required number of bacterial samples per year to improve monitoring and reporting of samples and results. Drinking water is monitored by other parameters to ensure safety of water distributed (Chlorine and Turbidity). Low sample submission does not indicate unsafe drinking water.

[2]City of Yellowknife requires 21 treated water bacterial samples per month (252 total) due to population.