Government of the
Northwest Territories

DRINKING WATER PRIMER 2021

Government of
Northwest Territories

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 water 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 optimized. Community governments take the primary role of providing safe drinking water. Various GNWT departments provide support, training, certification, operational funding, monitoring, and enforcement to support delivery of drinking water services.

At the community level, local water treatment plant operators carry out the day-to-day operation of NWT water treatment plants. These operators are trained 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 and 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. There were significant improvements in the number of samples completed between 2020 and 2021; however, some reporting targets were missed. This does not mean that the water was unsafe to drink, but it does demonstrate that community governments were still experiencing the external challenges brought on by the pandemic. The GNWT will continue to offer ongoing support to communities struggling to meet their sampling requirements.

For any questions or concerns on the status or operation of your water treatment system, feel free to contact your local Senior Administrative Officer or the Department of Health and Social Services Environmental Health division who can be reached at Environmental_Health@gov.nt.ca.

2021 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)*
Aklavik	Class II	Mackenzie River (Peel Channel)	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	55
Colville Lake	Small System	Colville Lake	Cartridge Filtration, Chlorination, Storage	×	×	0
Délı̨ne	Small System	Great Bear Lake	Cartridge Filtration, UV, Chlorination, Storage	×	✓	70
Behchokǫ̀ (Edzo)	Class II	West Channel	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	×	28
Behchokǫ̀ (Rae)	Class II	Marian Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	×	27
Fort Good Hope	Class I	Mackenzie River	Membrane Filtration, Chlorination and Storage	×	✓	23
Fort Liard	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	✓	141
Fort McPherson	Class I	Deep Water Lake	Membrane Filtration, Activated Carbon Filtration, Chlorination and Storage	×	✓	96
Fort Providence	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	×	✓	52
Fort Resolution	Class II	Great Slave Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	60
Fort Simpson	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	25
Fort Smith	Class III	Slave River	Upflow Clarifier, Filtration, Chlorination, Fluoridation, Storage	✓	×	31
Gamètì	Class I	Rae Lake	Membrane Filtration, Chlorination, and Storage	✓	✓	115
Hay River	Class II	Great Slave Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	126
Inuvik	Class III	Mackenzie River	Coagulation, Membrane Filtration , Chlorination, Fluoride, Storage	✓	✓	91
Jean Marie River	Class I	Mackenzie River	Membrane Filtration, Chlorination, and Storage	×	✓	0
Łutselk'e	Class I	Great Slave Lake	Membrane Filtration, Chlorination and Storage	✓	✓	67
Nahanni Butte	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	×	10
Norman Wells	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	132
Paulatuk	Class I	New Water Lake	Membrane Filtration, Chlorination, and Storage	✓	×	19
Sachs Harbour	Small System	DOT Lake	Cartridge Filtration, Chlorination	×	✓	90
Sambaa K'e	Class I	Trout Lake	Membrane filtration, Chlorination and Storage	×	×	53
Tsiigehtchic	Class I	Tso Lake	Nano-Filtration, Chlorination and Storage	×	✓	95
Tuktoyaktuk	Class I	Kudlak Lake	Pressure Filtration, UV, Chlorination and Storage	✓	✓	95
Tulita	Class I	Great Bear River	Micro-Filtration, Chlorination and Storage	✓	✓	32
Ulukhaktok	Small System	RCAF Lake	Pre-Filter, UV, Chlorination and Storage	×	✓	46
Wekweètì	Class I	Snare Lake	Membrane Filtration, Chlorination, and Storage	×	×	46
Whatì	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	×	×	73
Wrigley	Class I	Mackenzie River	Membrane filtration, Chlorination and Storage	×	×	29
Yellowknife	Class II	Yellowknife River	Membrane Filtration, Chlorination, Fluoridation, Storage	✓	✓	308[2]

**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