



DRINKING WATER UPDATE 2023

Government of
Northwest Territories

Drinking water in the Northwest Territories (NWT) goes through a number of treatment steps and monitoring 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 *Water Supply System Regulations* within the NWT *Public Health Act* (PHA). The PHA adopts the *Guidelines for Canadian Drinking Water Quality* 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, operators certification, operational funding, monitoring, and enforcement to support delivery of drinking water services.

At the community level, local water treatment plant operators conduct the day-to-day operation of NWT water treatment plants. All operators are required to be fully trained based on the level of complexity of the plant they operate. Operators are also required to maintain their certification with ongoing training and education. Operators are responsible for maintaining their water plant, optimizing 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 colour. Further detail on water treatment operations and operator training is available on the [MACA Drinking Water in the NWT](#) webpage.


The summer of 2023 was one of the worst wildfire seasons that the NWT has ever been through. To monitor for any potential impacts of wildfire on drinking water supply systems, H&SS in collaboration with MACA implemented an enhanced sampling program to monitor additional parameters of concern. The first round of sampling was collected in all communities in the late fall, early winter of 2023. The main purpose of this sampling is to monitor any impacts of airborne pollutants and smoke, as well as runoff from burnt areas on drinking water sources. The impacts of forest fires on water supply are not often seen immediately, and monitoring will continue as necessary to ensure drinking water safety. For further details about sampling parameters contact Environmental_Health@gov.nt.ca.

2023 Water Quality Summary - Table

Community	Plant Classification	Water Source	Water Treatment Process	Certified Operator	Treated Water Chemical Tests	Treated Water Bacteria Tests <i>(48 required, 228 for Yellowknife)</i>
Aklavik	Class II	Mackenzie River (Peel Channel)	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	45
Colville Lake *	Small System	Colville Lake	Cartridge Filtration, Chlorination, Storage	✗	✓	0
Déljne	Small System	Great Bear Lake	Cartridge Filtration, UV, Chlorination, Storage	✗	✓	46
Behchok̄	Class II	West Channel & Marian Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	325 ²
Fort Good Hope	Class I	Mackenzie River	Membrane Filtration, Chlorination and Storage	✗	✓	30
Fort Liard	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	✓	106
Fort McPherson	Class I	Deep Water Lake	Membrane Filtration, Activated Carbon Filtration, Chlorination and Storage	✓	✓	59
Fort Providence	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✗	✓	36
Fort Resolution	Class II	Great Slave Lake	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	39
Fort Simpson	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	7
Fort Smith	Class III	Slave River	Coagulant assist settlement, Conventional filtration, Chlorination, Fluoridation, Storage	✓	✓	70
Gamèti	Class I	Rae Lake	Membrane Filtration, Chlorination, and Storage	✗	✓	3
Hay River	Class II	Great Slave Lake	Conventional (Coagulation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	154
Inuvik	Class III	Mackenzie River	Coagulation, Membrane Filtration, Chlorination, Fluoride, Storage	✓	✓	99
Jean Marie River	Class I	Mackenzie River	Membrane Filtration, Chlorination, and Storage	✗	✓	29
Łutselk'e	Class I	Great Slave Lake	Membrane Filtration, Chlorination and Storage	✓	✓	47
Nahanni Butte	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✓	✓	19
Norman Wells	Class II	Mackenzie River	Conventional (Coagulation, Flocculation, Sedimentation and Filtration), Chlorination and Storage	✓	✓	91
Paulatuk	Class I	New Water Lake	Membrane Filtration, Chlorination, and Storage	✗	✓	53
Sachs Harbour	Small System	DOT Lake	Cartridge Filtration, Chlorination	✗	✓	63
Sambaa K'e	Class I	Trout Lake	Membrane filtration, Chlorination and Storage	✗	✓	7
Tsiigehtchic	Class I	Tso Lake	Nano-Filtration, Chlorination and Storage	✗	✓	88
Tuktoyaktuk	Class I	Kudlak Lake	Pressure Filtration, UV, Chlorination and Storage	✓	✓	81
Tulita	Class I	Great Bear River	Membrane Filtration, Chlorination and Storage	✓	✓	48
Ulukhaktok	Small System	RCAF Lake	Pre-Filter, UV, Chlorination and Storage	✓	✓	8
Wekweèti	Class I	Snare Lake	Membrane Filtration, Chlorination, and Storage	✗	✓	44
Whati	Class I	Groundwater Well	Potassium Permanganate Assisted Greensand Filtration, Softening, Chlorination and Storage	✗	✓	81
Wrigley	Class I	Mackenzie River	Membrane filtration, Chlorination and Storage	✗	✓	0
Yellowknife	Class II	Yellowknife River	Membrane Filtration, Chlorination, Fluoridation, Storage	✓	✓	398 ³

*Boil Water Advisory

 meets Requirements

 Does not meet Requirements

¹HSS 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. Other parameters like Chlorine and Turbidity of drinking water are also monitored to ensure the good quality of water distributed. Low sample submission does not indicate unsafe drinking water.

²Includes both Rae and Edzo water treatment plants

³City of Yellowknife requires 21 treated water bacterial samples per month (252 total) due to population.