

ACCESSIBILITY, QUALITY AND SAFETY OF LIARD FIRST NATION'S DRINKING WATER SUPPLY

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WHY DID WE DO THIS RESEARCH?

Safe drinking water has a major influence on health. Federal and provincial governments have provided programs and funding to help First Nations communities make drinking water safe, but First Nations communities still experience more water-related health problems than non-First Nations groups in Canada. Liard First Nation (LFN) is a community located in Watson Lake, Yukon Territory. LFN has an established public drinking water system with effective regulations, regular water sampling and certified operators for their drinking water treatment plant and water truck delivery. This project collected information on the Liard First Nation's (LFN) access to and opinions about drinking water, as well as took steps to measure the drinking water safety and sustainability in Watson Lake, in order to help community leaders make decisions about drinking water supply, management and policy.



WHAT DID WE DO?

The project goal was to provide a baseline of information on important issues related to LFN-supplied drinking water quality, access and safety. Using a community-based research method, researchers:

1. Tested the quality of 40 private drinking water wells that are not regularly monitored;
2. Studied how the area's groundwater and surface water is connected;
3. Used a household survey to ask LFN residents about their values, concerns and practices regarding drinking water.

WHAT DID WE FIND?

1. Results from the private well tests were generally good. Some wells had higher levels of elements in the water, but these were within acceptable levels. Four wells had very low levels of a harmful chemical but the water is considered safe. No contamination related to landfill pollution was found.
2. The two aquifers present in the area are separated, in most places, by a layer of earth that very little water can pass through, called an aquitard, showing that groundwater is likely protected from surface-activity contamination.
3. The majority of survey respondents do not like the quality of their tap water and think it is contaminated. They believe it is leading to illnesses and affecting traditional activities. However, results from this study show that drinking water in the area is safe to drink.

WHAT ARE THE IMPLICATIONS FOR DECISION MAKERS?

Overall, there are no major concerns about contamination for ground or drinking water because of LFN drinking water management efforts to date, but researchers suggest more testing on the four wells that showed low levels of a harmful chemical (Tributyltin). To ensure that residents do not get sick from their drinking water, the community water monitors should continue to test for bacteria in water storage tanks and during spring run-off. The unknown location of water that leaches from the landfill should be further investigated in order to make sure it does not contaminate the groundwater. Residents gave several suggestions on how to make their tap water better to drink. They would also like to improve communication about, and testing for, their tap water.

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