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**EKOS Research Associates Inc.**

# Perceptions of Drinking Water Quality in First Nations Communities and General Population

## *Summary*

Prepared for:

First Nations and Inuit Health Branch/FNIHB at Health Canada (HC) now  
Department of Indigenous Services Canada

Ce rapport est aussi disponible en français

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# SUMMARY

First Nations and Inuit Health Branch/FNIHB at Health Canada (HC), now Department of Indigenous Services Canada (DISC) assists First Nations in ensuring safe drinking water in their communities. Part of the challenge facing DISC is the role of perception of the members of First Nations communities with regards to the safety of their drinking water. Water treatment, monitoring and testing are ineffective if people do not believe that their water is safe to drink and are using alternative sources, such as bottled water, instead of that provided by the community. The purpose of this research is to gain insight into the views of the First Nations community population on the quality of the water to which they have access First Nations community. This will help to assess the effect of current First Nations community water quality programs and allow us to compare perceptions of water quality to those living in other small communities. The major objective is to find out how people feel about the safety of their water, and whether there has been a change in this perception since the implementation of the First Nations Water and Wastewater Action Plan (FNWWAP) in order to measure how effective programs are (whether through increased communication, education or actual improvement of facilities, treatment and monitoring) in increasing people's confidence in and use of the water provided by the community.

The study involved the collection of a brief (seventeen minute) interview with roughly 710 residents of First Nations communities and (fifteen minute interview) with 721 residents of other small communities (not in a First Nations community) with populations of less than 5,000, which are not bordering a large urban area. In addition to the randomly selected cases with First Nations residents, an additional 118 cases were completed were residents of communities that had experienced a Drinking Water Advisory (DWA) in the previous 12 months. Common questions were used to assess perceptions of water quality, safety, changes over time and uses of tap versus bottled water, as well as incidence and frequency of DWA and, in the case of First Nations residents, recall of public service announcements addressing DWAs on the radio. Results are national in scope and were collected by telephone from January 8 to February 15, 2018.

## MAIN FINDINGS

### Water Quality

Results highlight the difference in confidence levels between First Nations and other residents when it comes to the quality of their water. Just half of First Nations residents rated the quality of their drinking water as good, compared to 74 per cent among residents of other small communities (i.e., the general public). In fact, one-fifth of First Nations residents consider their drinking water

quality to be bad compared to only eight per cent among residents of other small communities. Long-term tracking suggests, however, that the perceptions around water quality have improved steadily over time for First Nations (21 per cent rate the quality as bad, compared with 33 per cent in 2007).

In terms of safety, results are more positive; one-third of First Nations residents view their tap water as very safe and four in ten think it somewhat safe. Nonetheless, one in five feel that their water is either somewhat or very unsafe. Considerably higher proportions of residents of other small communities perceive their tap water supply to be safe (93 per cent, compared with 74 per cent of residents in First Nation communities). Long-term tracking points to a gradual improvement for First Nations communities (74 per cent say their water is safe, compared to 62 per cent in 2007). Those using piped in water report considerably greater confidence than households using wells as the main source of water.

Nearly half of First Nations residents believe that their water quality has remained the same over the past five years. One-third believe that the water is now safer than it was; however, one in six judge the water to be less safe to drink than it was five years ago. The general public, on the other hand, are less apt to point to a deterioration in their water quality over the last five years. Tracking shows that more First Nations communities are saying that there has been no change (46 per cent, compared with 32 per cent in 2007).

When prompted specifically about the types of information that would help to reassure them about their tap water quality, three-quarters of First Nations community residents said that more information about water quality testing procedures and information about the quality of tap water on their community would make them feel safer. Two-thirds also wish to know more about what to do in case of a DWA/BWA, as well as being provided with a telephone number or website they could access to check on the current quality of their community's tap water. Compared to residents of other small communities, there is a significantly higher demand among First Nations residents for this type of information.

### Water Usage

First Nations residents are less likely to use tap water for various household applications compared with residents of other small communities. Still, over four in five First Nations residents use tap water for brushing teeth, washing food, or cooking. By comparison, almost all (95 to 97 per cent) residents of other small communities use tap water for these applications. A drinking water advisory within the past 12 months strongly influences the disuse of tap water for all applications, along with region (those in Alberta and Saskatchewan least likely to use tap water) and the size of the household (with larger households more likely to use tap water).

First Nations community residents are more likely than residents of other small communities in the general public to have used bottled water in their household; most predominantly for drinking water (nine in ten). Half or less have used bottled water for making coffee or tea, in food preparation, or cooking. Residents of First Nations communities use bottled instead of tap water for a plethora of reasons, with nearly three in ten indicating that they don't trust their tap water (a stronger reason among First Nations residents). One in five First Nations residents (19 per cent) said they prefer the taste or smell of bottled water, also indicated by 26 per cent of residents of other small communities. Similarly, 19 per cent of First Nations community residents said it is more convenient (also more often stated among the general population; 32 per cent).

### Drinking Water Advisories

Four in ten people living in First Nations communities report a past or current Drinking or Boil Water Advisory (DWA/BWA). This is compared with just one in seven residents in other small communities. Among First Nations residents reporting that they were currently under a DWA/BWA or had been under an advisory in the previous 12 months, about four in ten depend exclusively on bottle water over the course of the advisory. One-quarter use only boiled water and one in six use some combination of the two.

The most frequent sources of information among First Nations people who have been under a DWA/BWA include local councils, the radio, and the Internet. Eight in ten feel they had sufficient information to make informed decisions during their most recent DWA/BWA, although one in five respondents indicated that they would like more information as to the reasons behind the advisory.

Six in ten people living in First Nations communities who have been under an advisory also reported that they recall seeing a notification in the form of a poster. Just under half, meanwhile, recall seeing a door hanger notification (19 per cent) or hearing a public service announcement on the radio (46 per cent). In all three cases, more than eight in ten found these notifications useful.

### Views on Chlorine and Fluoride

Nearly two-thirds of residents of First Nations communities are aware that chlorine is present in their drinking water, significantly higher than found among residents of other small communities. After being informed that chlorine is added to drinking water to reduce or eliminate bacteria and viruses, just less than half of First Nations residents confirmed that they are supportive of chlorine being added to the water they drink, similar to the general population. For those who are opposed to the idea of chlorine in their drinking water, roughly one-quarter say it is because they don't like the taste or are concerned about the effect of chlorine on personal health.

The majority of people living in First Nations communities say they notice a difference in the taste or smell of water that has chlorine added. Over one-third say they have looked for a different source of water because of the taste or smell. Six in ten have used bottled water as an alternate source, with other mentions of a natural source (such as a lake or river), a filtration system, or a well.

After being briefly informed of fluoride sources and the reason for including it in drinking water, respondents were asked about their level of support or opposition to this treatment of drinking water. Four in ten (39 per cent) residents of First Nations communities do not hold a strong opinion on fluoride, neither supporting nor opposing its inclusion. Among those that do hold an opinion results are fairly evenly split, with roughly one-quarter supportive (24 per cent) or opposed (27 per cent). Of the 27 per cent who are opposed, roughly half are concerned about the effects of fluoride on the human body (47 per cent) and one-quarter do not believe in adding anything to water (27 per cent).

The contract value for the POR project is \$142,990.20 (including HST).

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