

W A T E R F I R S T

BACKGROUND INFO FOR FUNDRAISERS

GENERAL KNOWLEDGE

When including Indigenous knowledge, voices and perspectives, consult your school board's First Nations, Métis, and Inuit Department, or equivalent.

WHAT IS WATER FIRST?

We are a nonprofit organization helping to resolve the water crisis in Indigenous communities through education and training of Indigenous youth.

WHAT IS A RESERVE?

A reserve is a piece of land set aside by the Canadian Government meant for the exclusive use of an Indigenous group. It is usually used for the occupancy of defined Indigenous group members. Most, but not all, of the communities Water First works with are living on a reserve.

WHAT IS INDIGENOUS OR TRADITIONAL KNOWLEDGE?

These terms have been used interchangeably, and there are different arguments for which term is preferable. What is important to understand is that Indigenous or Traditional knowledge is current and often specific to a locality and nation of people. It is most commonly passed on by Elders and knowledge keepers through ceremonies and other activities. The Assembly of First Nations has a compressive list of knowledge sharing opportunities within a local community.

ABOUT WATER QUALITY

WHAT TYPES OF POLLUTANTS ARE THERE?

Pollutants in water can be microbiological (bacteria, viruses, protozoa or algal toxins), chemical (mercury, pesticides, nitrogen, salts) and radiological (byproducts of nuclear technologies).

WHAT TESTS ARE PERFORMED TO DETERMINE IF WATER IS SAFE TO CONSUME?

To determine the quality of water, testing can detect indicators of E. coli and total coliforms, chlorine levels, turbidity (how murky the water is), pH and the presence of iron and manganese. More advanced testing can determine levels of organic materials, inorganic chemicals, radionuclide content, and other contaminants.

HOW CAN POLLUTANTS SUCCESSFULLY BE REMOVED FROM OUR WATERWAYS?

It can be difficult to remove pollutants once the water is contaminated. The process of removing a contaminant depends on what type of pollutant it is. The most common methods of removing organic pollution (organic material, bacteria, etc.) from drinking water are through sedimentation, filtration and disinfection.

WHAT IS SEDIMENTATION AND FILTRATION?

Sedimentation is the process of waiting for particles to sink to the bottom of a holding chamber. Filtration is the process of removing solid particles that are still in the water after sedimentation, like bacteria, protozoa, viruses, or fine particles. Disinfection adds a substance, like chlorine, to the water to kill any remaining harmful microorganisms, like parasites and bacteria, or viruses that have not been removed by sedimentation and filtration.

WHAT MAKES THE WATER IN SOME INDIGENOUS COMMUNITIES SO UNDRINKABLE?

Water is undrinkable when it contains harmful pollutants from one or more sources such as untreated sewage discharge, resource extraction (mining or forestry) and agriculture. Although it may look clean, there are still microscopic pollutants that can cause harm.

WHAT IS A DRINKING WATER ADVISORY, AND WHY ARE THEY ISSUED?

Drinking water advisories (DWA) are generally precautionary. They are often issued before drinking water quality problems occur. The advisories take different forms:

- Long-Term Drinking Water Advisory (LT-DWA) is in place if the drinking water advisory has been in place for over a year.
- Boil water advisory (BWA) addresses harmful living organisms in the water.
- Do not consume (DNC) addresses non-living contaminants like mercury and pesticides.
- Do not use (DNU) addresses non-living contaminants like mercury and pesticides.

Boil water advisories are the most common. They inform the community that the water must be boiled before using to protect against potential disease-causing bacteria, viruses or parasites. The high heat of boiling kills many harmful organisms living within the water.

ABOUT THE EFFECTS

WHAT ARE THE EFFECTS OF DRINKING UNSAFE WATER?

The health effects of drinking unsafe water can include digestive problems, skin rashes and muscle atrophy (the muscle wasting away). It can even lead to cancer, heart failure and death. The people at risk of experiencing more severe effects include infants, the elderly or those already sick.

HOW IS WATER FIRST A PART OF THE SOLUTION?

83% of boil water advisories are issued due to equipment and process problems. Water First focuses on educating and training local community members to run water treatment plants and to understand the scientific effects of pollution through water science in general.

WHY DON'T PEOPLE MOVE TO SOMEWHERE WHERE THE WATER IS SAFE?

Asking the people to leave a community that does not have safe water is not solving the problem, because in many cases, the land and water pollution is where the issues originate. Relocating is also expensive and insensitive to the local culture and community members.

WHAT CAN YOU DO TO HELP?

The first step is educating yourself and others about the water crisis that is happening today in Indigenous communities. Following this, you can work to support the efforts of Water First through fundraising or donating.