

# SAFETY MEMO

June 6<sup>th</sup>, 2022 – Non-potable water



Did you know?

## Introduction

**Non-potable water** means water that does not meet the requirements for human consumption. Non-potable water does not have measures in place to control all potential disease-causing pathogens and / or chemical contaminants to the extent needed to be considered potable. Non-potable water and process water are both considered not drinkable.

**Process water** is water used for a variety of manufacturing processes, including boiler feed water and steam production, cooling tower make-up water, means of transport, reclaimed or recycled water, coating and plating, rinsing, and spraying, washing, cleaning agent, etc. The quality of process water within a building's piped distribution system may result in microbial or chemical contamination of drinking-water.

**Potable water**, also known as drinking water, is treated to levels that meet provincial, territorial, and federal standards for consumption. Potable water is considered safe to drink when it meets the health-based guidelines set out in:

[Health Canada's document Guidelines for Canadians Drinking Water Quality – Summary Table](#)

[United States Environmental Protection Agency National Primary Drinking Water Regulations](#)

[World Health Organization Water and Sanitation](#)



## Risks

Contaminants in drinking water can lead to health issues, including gastrointestinal illnesses, nervous system, reproductive problems, neurological disorders, kidney failure and cancer; can transmit diseases such as diarrhoea, cholera, hepatitis, dysentery, typhoid, polio, stomach pain, and cardiovascular<sup>1</sup>.

## Prevention

- For safety reasons, it is crucial that signs are posted at all non-potable water and process water supplies, alert people at facility to where these hazardous water supplies exist.
- Non-potable water or process water piping shall be identified by markings that are permanent, distinct, and easily recognized.
- Use of good design practices that prevent, eliminate and control cross-connections.
- Any water piping installation where a harmful substance might gain access to a drinking-water supply must have a backflow protection device installed.

## Regulations

- National Plumbing Code of Canada 2015 – 2.6. Potable Water Systems & 2.7. Non-Potable Water Systems.
- CAN/CSA B128.2:06 (R2021) Design and Installation of Non-potable Water Systems
- [WHO Health aspects of plumbing](#)
- [National Collaborative Centre for Environmental Health, Drinking Water Guidelines and Governance](#)
- [EPA Drinking Water Guidelines](#)
- [European Commission Drinking Water](#)
- [Ministère des solidarités et de la sante, Qualité de l'eau potable](#)
- [Uniform Plumbing Code 2021](#)
- [International Plumbing Code 2021](#)
- [National Standard Plumbing Code 2021](#)
- ISO 20426:2018 Guidelines for Health Risk and Assessment for Non-potable Water Reuse

<sup>1</sup> Drinking water contamination & cancer in Canada and USA: A review. (2018). University of Alberta. Retrieved from

<https://www.ualberta.ca/augustana/media-library/research/acsrc/reports/acsrc/no-5018.pdf>

