

PFAS/PFOS IN DRINKING WATER (PER- AND POLYFLUOROALKYLATED SUBSTANCES)

PREPARED BY CWWA DRINKING
WATER QUALITY COMMITTEE

Purpose of this Fact Sheet

There has been growing interest and concern in the drinking water industry in North America over a group of compounds called Per- and Polyfluoroalkylated Substances or PFAS. This fact sheet was prepared by the CWWA Drinking Water Quality Committee and is intended to provide general high level information to CWWA members, while also referencing more detailed sources of information that will help members and their associated utilities prepare their own responses to questions about PFAS compounds they may encounter from their customers, municipal leaders, political leaders, media, and other concerned stakeholders.



Background on PFAS

Per- and Polyfluoroalkylated Substances, or PFAS, are a large and chemically diverse group of man-made compounds that contain fluorine and carbon atoms. PFAS were manufactured and used for several decades in many applications such as surfactants, lubricants, and repellents for dirt, water, and grease, in fire fighting foams, textiles, cosmetics, and food packaging materials. They are characterized by their persistence and stability in the environment and are known as the “forever chemicals” because they breakdown or decompose extremely slowly. They have been detected in humans, wildlife, and environmental media around the world, they tend to biomagnify in food chains, and they are increasingly associated with a wide range of adverse human health effects.



Additional Sources of Information on PFAS

There are concerns that water sources impacted by industrial discharges or that are close to civilian and military airports may potentially be contaminated with PFAS compounds and are at higher risk. There are many good summaries and sources of information available on PFAS compounds and some are listed here:

- [Health Canada Water Talk - Perfluoroalkylated substances in drinking water - Canada.ca](#)
- [Walkerton Clean Water Fact Sheet on PFAS Compounds](#)
- [US EPA PFAS Explained](#)
- [Interstate Technology Regulatory Council - Technical Resources for Addressing Environmental Releases of PFAS Compounds](#)

Health Canada Activity on PFAS

Health Canada has been actively monitoring the PFAS issue and developing drinking water guidance. In the 2018, they released guidelines with health-based Maximum Acceptable Concentrations (MACs) for the two most common PFAS compounds associated with drinking water: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) and preliminary health screening values for nine additional PFAS compounds. Links to the technical documents that explain the basis for the MACs can be found here:

- [Guidelines for Canadian Drinking Water Quality: Guideline Technical Document - Perfluorooctanoic Acid \(PFOA\) - Canada.ca](#)
- [Guidelines for Canadian Drinking Water Quality: Guideline Technical Document - Perfluorooctane Sulfonate \(PFOS\) - Canada.ca](#)

Health Canada is continuing to assess potential human health impacts of PFAS compounds and is collaborating with provinces, territories as well as the international community, including the U.S. Environmental Protection Agency and the World Health Organization. In April 2021 they issued a [Notice of Intent to Address the broad class of Per- and Polyfluoroalkyl Substances \(PFAS\)](#). The Government of Canada will continue to invest in research and monitoring on PFAS and will collect and review rapidly evolving information on PFAS to inform a class-based approach.

What Water Utilities Can Do:

As the science and our understanding on PFAS compounds continues to develop, there are several steps that water utilities in Canada may want to consider. These include:

- Becoming familiar with the issues and the background information on PFAS in the various sources cited above
- Being prepared to answer questions for customers and municipal leaders, politicians, and other stakeholders on PFAS compounds
- Preparing media briefs
- Carrying out proactive monitoring to determine if their water supplies might be at risk, recognizing the potential for newer much lower MACs. There is also the potential for a class based approach (i.e. the sum of concentrations for a group of PFAS).

Water Quality Monitoring:

Testing for PFAS compounds in drinking water requires specialized laboratories with sophisticated instruments capable of detecting and measuring these compounds at very low levels. The science on measuring PFAS is continuously evolving. Nevertheless, commercial labs are available that can carry out PFAS testing. We recommend looking for accredited laboratories on the following websites of lab accreditation agencies in Canada:

- [Canadian Association of Laboratory Accreditation \(CALA\)](#)
- [Standards Council of Canada \(SCC\)](#)
- [Quebec Accreditation Program for Analytical Laboratories \(CEAEQ-PALA\)](#)

What CWWA Drinking Water Quality Committee is Doing:

- Monitoring the issue of PFAS in drinking water as it continues to evolve including developments in analytical methods, occurrence in the environment, and treatment technologies
- Continuing to communicate with Health Canada experts on this topic
- Providing current information to our membership that can be used to develop strategies to assess the impact of this issue on their system.