Understanding the Summary Tables

Frequently Asked Questions

1. What does GUDI stand for?

A: GUDI is an acronym for groundwater under the direct influence of surface water. Shallow or poorly-built wells and springs, or wells and springs located very close to surface water bodies, may be affected by surface water. These types of wells are called GUDI wells. They may have higher levels of micro-organisms and organic matter than a deep well.

2. Why is information on some standards available only for surface water and GUDI systems, and information on other standards only available for groundwater and GUDI systems?

A: Surface water and GUDI systems are more likely to become contaminated with micro-organisms such as protozoa than groundwater systems, and usually have higher levels of turbidity and organic matter. When chlorine is added to water with high levels of organic matter, it tends to form disinfection by-products such as trihalomethanes (THMs) and haloacetic acids (HAAs).

True groundwater systems - properly built wells drilled into deep aquifers - are unlikely to be contaminated by micro-organisms such as protozoa (*Giardia and Cryptosporidium*) that can make people sick. They also have lower levels of turbidity and organic matter, and do not tend to form disinfection by-products when chlorine is added to the water.

Groundwater and GUDI systems can be affected by naturally-high levels of trace elements, such as arsenic, fluoride and uranium. If these elements are present in the soil or rock that the groundwater flows through, they may leach out of the soil or rock and into the water.

For these reasons, the protozoa, turbidity and disinfection by-products standards apply to surface water and GUDI systems but not to groundwater systems, and the trace element standards apply to groundwater and GUDI systems but not to surface water.

Water systems may collect additional data on other parameters. Residents are advised to look to their local water suppliers for more information

3. Why is the data divided between seasonal and year-round systems?

A: Most of the chemical standards, including standards for disinfection by-products and arsenic were developed based on lifetime (70-year) exposure risks. Seasonal systems, by definition, are only open for half the year, and most are only used on weekends or for a few months a year at most, so the health risks associated with these systems tend to be lower.

4. Why is THM or HAA data missing for some years?

A: Smaller water systems are only required to sample for disinfection by-products, such as trihalomethanes (THMs) and haloacetic acids (HAAs), every other year, so data may not be available for your water system for every year. Data may also be missing for some smaller systems, or for systems that have only recently begun sampling.

5. If an upgrade has been completed, why are disinfection by-products, arsenic or uranium levels in my water system still high?

A: When a water treatment plant upgrade is completed, some or all of the disinfection by-products samples taken that year would have been taken before the upgrade was completed. The lower disinfection by-products levels associated with the new

water treatment process may not be reflected in the reported disinfection by-products value for a year or two after the upgrade is completed.

Small groundwater systems only test for arsenic, uranium, fluoride and other trace elements once every three years, as the levels of these naturally-occurring elements do not tend to change very much over time. Lower values associated with a recent water treatment plant upgrade may not be reported for a year or more following the upgrade.

If your water system has recently upgraded, contact your drinking water supplier for more up-to-date drinking water quality results.

6. Why is there no data for other disinfection by-products standards such as bromate, chlorite, chlorate or *N-nitrosodimethylamine* (NDMA)?

A: When water systems use an alternative disinfectant, other than chlorine, other disinfection by-products may form, and other disinfection by-product standards will be applied. For example, bromate may form in water systems that use ozone as a disinfectant; chlorite and chlorate may form in systems that use chlorine dioxide as a disinfectant; and NDMA may form in systems that use chloramination.

The data tables focus on the most common disinfection by-products, THMs and HAAs. Very few Manitoba water systems use alternative disinfectants.

Contact your local water supplier for more information on the disinfection process or disinfection by-product standards that apply to your water system.

7. Why is there no data for contaminant standards such as benzene, ethylbenzene, toluene, total xylenes (BTEX), or trichloroethylene and tetrachloroethylene?

A: The standards for benzene, ethylbenzene, toluene, total xylenes (BTEX), trichloroethylene and tetrachloroethylene are based on current Canadian guidelines associated with contaminants spills. There are no water systems in Manitoba where BTEX, trichloroethylene or tetrachloroethylene are known to exceed the standards.

8. There are no lead exceedances in the table; does that mean Manitoba doesn't have a problem with lead in drinking water?

A: Most of the lead samples taken so far have been collected at the water treatment plant or in the water distribution system. When compliance is assessed in this way, all Manitoba public water systems meet the lead standard. In 2020, the standard for lead in drinking water was lowered from 0.010 mg/L to 0.005 mg/L and the compliance point moved to the consumer's tap. Manitoba Conservation and Climate has been working with Manitoba Health Seniors and Active Living and municipal water suppliers to develop residential tap water quality testing programs for lead in drinking water. The new tap water quality testing programs will be phased in over several years. For more information, see the Lead factsheet.

9. Why are water suppliers given time to comply with new drinking water quality standards?

A: Upgrades to a water system can be expensive. There may be a number of options available to meet the standards and suppliers need time to compare options and decide on the best, and most cost effective, way to meet the standard. The health risks associated with the new standards are generally low, based on lifetime (70-year) exposure. Given that the public health risks are generally low, and the costs associated with meeting the standards can be relatively high, suppliers are given time to consider various options and decide how best to finance them. In the mean time, Manitoba residents may wish to consider options to reduce their exposure as described in the factsheets on the Public Water System Data Portal.

10. Are there other drinking water quality guidelines I should be aware of?

A: Yes. Health Canada regularly reviews and updates the national drinking water quality guidelines. The Office of Drinking Water reviews available information and data to determine if a new guideline has potential to impact Manitoba water systems, and works with public health officials to prioritize issues of potential concern. Whenever Health Canada proposes to lower an existing guideline or create a new guideline, they ask the provinces and territories to submit impact statements. These impact statements are included in the draft national guideline technical document released for public comment on the Health Canada website. Efforts are made to advise water system owners and the general public if a proposed change has potential to impact them.

Manitoba has been following the development of the national guideline for manganese in drinking, which was updated in 2019, and has been working to provide water system owners and operators and the general public with information on manganese. See the fact sheet on Manganese in Manitoba Water Supplies.

Information on the national guidelines and the guideline development process is available here: www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/canadian-drinking-water-guidelines.html

Health Canada has also developed a series of Water Talk factsheets for new or revised guidelines. These are available here: www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality.html#wtfs

11. Where can I get more information?

A: For more information on your water system, contact your local drinking water supplier. Large public water suppliers must make annual reports available to the public, and must post a copy of that report on the Internet by March 31 each year. All public and semi-public water suppliers are required to retain records for two years, including water quality data, copies of their water system operating licence and any permits to construct, or orders or advisories issued to them, and to make those records available to their customers on request.

For health related questions, call Health Info Santé Links at 204-788-8200 or toll free at 1-888-315-9257 or call your local public health office.

For more information about drinking water in Manitoba, contact Manitoba Conservation and Climate Office of Drinking Water at 204-945-5762, or refer to the website at www.manitoba.ca/drinkingwater to find a local office near you.