Hastings 2023 Drinking Water Report

Making Safe Drinking Water

Your drinking water comes from a groundwater source: six wells ranging from 280 to 400 feet deep, that draw water from the Jordan aquifer.

Hastings works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources.

Contact Joe Spagnoletti, PW Superintendent, at 651-480-6185 or jspagnoletti@hastingsmn.gov if you have questions about Hastings' drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Hastings Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2023.

We work with the Minnesota Department of Health to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health.

Learn more by visiting the Minnesota Department of Health's webpage Basics of Monitoring and testing of Drinking Water in Minnesota (https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html).

How to Read the Water Quality Data Tables

The tables below show the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the Environmental Protection Agency's limits. Substances that we tested for but did not find are not included in the tables.

We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the Minnesota Department of Health at 651-201-4700 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Some contaminants are monitored regularly throughout the year, and rolling (or moving) annual averages are used to manage compliance. Because of this averaging, there are times where the Range of Detected Test Results for the calendar year is lower than the Highest Average or Highest Single Test Result, because it occurred in the previous calendar year.

Definitions

- **AL (Action Level)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **EPA:** Environmental Protection Agency
- **Hazard Index or HI.** The Hazard Index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO–DA, and/or PFBS allowed in water delivered by a public water system. A Hazard Index greater than 1 requires a system to take action.
- **MCL (Maximum contaminant level)**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLG (Maximum contaminant level goal)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL (Maximum residual disinfectant level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum residual disinfectant level goal)**: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **N/A (Not applicable)**: Does not apply.
- **pCi/l (picocuries per liter)**: A measure of radioactivity.
- **ppt (parts per trillion)**: One part per trillion is like one drop in one trillion drops of water, or about one drop in an Olympic sized swimming pool. ppt is the same as nanograms per liter (ng/l).
- **ppb (parts per billion)**: One part per billion in water is like one drop in one billion drops of water, or about one drop in a swimming pool. ppb is the same as micrograms per liter (μg/l).

- **ppm (parts per million)**: One part per million is like one drop in one million drops of water, or about one cup in a swimming pool. ppm is the same as milligrams per liter (mg/l).
- **PWSID**: Public water system identification.
- **TBD (To be determined):** Determined at a later date.

Monitoring Results – Regulated Substances

LEAD AND COPPER – Tested at customer taps.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Action Level**	**90% of Results Were Less Than**	**Number of Homes with High Levels**	**Violation**	**Typical Sources**
Lead (08/11/21)	0 ppb	90% of homes less than 15 ppb	2.9 ppb	0 out of 30	NO	Corrosion of household plumbing.
Copper (08/11/21)	0 ppm	90% of homes less than 1.3 ppm	0.14 ppm	0 out of 30	NO	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Nitrate	10 ppm	10.4 ppm	8.3 ppm	4.20 - 8.30 ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium (03/08/22)	2 ppm	2 ppm	0.05 ppm	N/A	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposit.
Combined Radium	0 pCi/l	5.4 pCi/l	2.1 pCi/l	1.5 - 2.1 pCi/l	NO	Erosion of natural deposits.

Potential Health Effects and Corrective Actions (If Applicable)

Nitrate: Nitrate in drinking water at levels above 10 parts per million is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG or MRDLG)	**EPA's Limit** (MCL or MRDL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Total Trihalomethanes (TTHMs)	N/A	80 ppb	26.6 ppb	24.80 - 26.60 ppb	NO	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA)	N/A	60 ppb	3.5 ppb	1.50 - 3.50 ppb	NO	By-product of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.5 ppm	0.40 - 0.59 ppm	NO	Water additive used to control microbes.

Total HAA refers to HAA5

OTHER SUBSTANCES – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Fluoride	4.0 ppm	4.0 ppm	0.75 ppm	0.65 - 0.73 ppm	NO	Erosion of natural deposits; Water additive to promote strong teeth.

Potential Health Effects and Corrective Actions (If Applicable)

Fluoride: Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of credible, peer-reviewed, scientific evidence that fluoridation reduces tooth decay and cavities in children and adults, even when there is availability of fluoride from other sources, such as fluoride toothpaste and mouth rinses. Since studies show that optimal fluoride levels in drinking water benefit public health, municipal community water systems adjust the level of fluoride in the water to

an optimal concentration between 0.5 to 0.9 parts per million (ppm) to protect your teeth. Fluoride levels below 2.0 ppm are not expected to increase the risk of a cosmetic condition known as enamel fluorosis.

PFAS Per- and Polyfluoralkyl Substances						
Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG or MRDLG)	**EPA's Limit** (MCL or MRDL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
PFOA	0 ppt	4.0 ppt	22.3	0-24	TBD, Violations become applicable as of April 26, 2029.	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities.
PFOS	0 ppt	4.0 ppt	4.3	0-4.3		
PFHxS	10 ppt	10 ppt	3.2	0-3.5		
HI (HFPO-DA, PFBS, PFHxS and PFNA)[1]	1 (unitless)	1 (unitless)	0.4	0-0.4		

Potential Health Effects and Corrective Actions:

PFAS: Recent testing results show that the average level of:

- PFOA at 22.2 ppt is above the maximum contaminant level (MCL) of 4.0 ppt.
- PFOS at 4.3 ppt is above the maximum contaminant level (MCL) of 4.0 ppt.

The water system has 5 years (until April 26, 2029) to implement solutions that reduce PFAS to levels below the MCL in the water supply. As of April 26, 2029, values above the MCL will be considered a violation, which will require corrective action and public notification. MDH will continue testing PFAS at this system on a quarterly basis. This is not an emergency - you do not need an alternative source of water such as bottled water. Boiling water will not remove PFAS. The immediate health risks are low for most adolescents and adults, but fetuses and infants are more vulnerable and can be among the most highly exposed. You may want to consider taking additional measures to reduce PFAS exposure from other sources and consider home water treatment if you have people who are more vulnerable in your household, like pregnant people and infants. If you have specific health concerns, consult your doctor. MDH has information available on home treatment for PFAS at:

PFAS and Home Treatment of Water - MN Dept. of Health (state.mn.us)
https://www.health.state.mn.us/communities/environment/hazardous/topics/pfashometreat.html

Specific contaminant health effects language is below:

PFOA: Some people who drink water containing PFOA in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including kidney and testicular cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOA in excess of the MCL following repeated exposure during pregnancy and/or childhood.

PFOS: Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

Your public water system is planning for water treatment to reduce the level of PFAS in the water. You will be informed of key milestones toward this effort and when the public water system has reduced the level of PFAS to levels below the MCL.

Please share this information with all other people who drink this water, especially those who may not have received this information directly (for example, people in apartments, nursing homes, hospitals, schools, prisons, and businesses). You can do this by posting this information in a public place or distributing copies by hand or mail.

UNREGULATED/ADDITIONAL RESULTS –Detected in drinking water.

Contaminant	MDH Health Based Guidance Values (HBVs)	Highest Average Result	Range of Detected Test Results
PFOA	0.0079 ppt	22.3	0-24
PFOS	2.3 ppt	4.3	0-4.3
PFHxS	47 ppt	3.2	0-3.5
PFHxA	200 ppt	9.3	2.7-10
PFBA	7000 ppt	365	150-370
PFBS	100 ppt	2.9	0-3.5
HRI (Health Risk Index)	1.0 (unitless)	1.0	0.1-1.0

Additional unregulated or other monitoring results performed by the water system are listed above, MDH has Health Based Guidance Values (HBVs) for some of these compounds. A summary of the HBVs can be compared to sample data measured at your public water system in the table above. It is important to note that these guidance values are not enforceable.

HBVs are based solely on potential health impacts and do not consider our ability to measure contaminants at very low concentrations nor the cost and technology of prevention and/or treatment. Guidance values may be set at levels that are costly, challenging, or impractical for a water system to meet (for example, large-scale treatment technology may not exist for a given contaminant).

A person drinking water with a contaminant at or below the HBVs would be at little to no risk for harmful health effects. If the level of a contaminant is above the HBVs, people of a certain age or with special health conditions—like a fetus or pregnant, infants, children, elderly, and people with impaired immunity—may need to take extra precautions. We are notifying you of the unregulated data and contaminants we have detected as a public education opportunity.

In early in 2024, MDH released new HBVs for two PFAS compounds, PFOA and PFOS. MDH is still evaluating how these will be used as it relates to drinking water systems.

Some People Are More Vulnerable to Contaminants in Drinking Water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Learn More about Your Drinking Water

Drinking Water Sources

Groundwater supplies 75 percent of Minnesota's drinking water, and found in aquifers beneath the surface of the land. Surface water supplies 25 percent of Minnesota's drinking water, and is the water in lakes, rivers, and streams above the surface of the land.

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

- **Microbial contaminants,** such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.
- **Inorganic contaminants** include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.
- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.

- **Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants** such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about your drinking water source(s) in a source water assessment, including:

- How Hastings is protecting your drinking water source(s);
- Nearby threats to your drinking water sources;
- How easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed.

Find your source water assessment at Source Water Assessments (https://www.health.state.mn.us/communities/environment/water/swp/swa) or call 651-201-4700 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Lead in Drinking Water

You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. Coming in contact with lead can cause serious health problems for everyone. There is no safe level of lead. Babies, children under six years, and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can get in your drinking water as it passes through lead service lines and your household plumbing system. Hastings is responsible for providing high quality drinking water, but it cannot control the plumbing materials used in private buildings.

Read below to learn how you can protect yourself from lead in drinking water.

1. **Let the water run** for 30-60 seconds before using it for drinking or cooking if the water has not been turned on in over six hours. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home.
    - You can find out if you have a lead service line by contacting your public water system, or you can check by following the steps at: https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home
    - The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure.
2. **Use cold water** for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water.
3. **Test your water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water.

- Contact a Minnesota Department of Health accredited laboratory to get a sample container and instructions on how to submit a sample:
  Environmental Laboratory Accreditation Program
  (https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam)
  The Minnesota Department of Health can help you understand your test results.

4. **Treat your water** if a test shows your water has high levels of lead after you let the water run.

   - Read about water treatment units:
     Point-of-Use Water Treatment Units for Lead Reduction
     (https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html)

Learn more:

- Visit Lead in Drinking Water
  (https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)
- Visit Basic Information about Lead in Drinking Water (http://www.epa.gov/safewater/lead)
- Call the EPA Safe Drinking Water Hotline at 1-800-426-4791.To learn about how to reduce your contact with lead from sources other than your drinking water, visit Lead Poisoning Prevention: Common Sources (https://www.health.state.mn.us/communities/environment/lead/sources.html).

Service Line Material Inventory

Our system will be working to complete an inventory of the service line materials before October 16, 2024. The service line consists of the pipes that connect the water main to your home. Older homes (1986 and older) may have materials such as lead in their service lines and this inventory will help us prioritize replacement of lead service lines in the future. We hope that customers will actively cooperate as we work to complete our inventory and we will make the information available once complete. For questions on the Water Service Line Inventory for Hastings, please visit https://bit.ly/hastingspipes or contact Hastings Public Works at 651-480-6185.

Help Protect Our Most Precious Resource – Water

Conservation

Conservation is essential, even in the land of 10,000 lakes. For example, in parts of the metropolitan area, groundwater is being used faster than it can be replaced. Some agricultural regions in Minnesota are vulnerable to drought, which can affect crop yields and municipal water supplies.

We must use our water wisely. Below are some tips to help you and your family conserve – and save money in the process.

- Fix running toilets—they can waste hundreds of gallons of water.
- Turn off the tap while shaving or brushing your teeth.
- Shower instead of bathe. Bathing uses more water than showering, on average.
- Only run full loads of laundry, and set the washing machine to the correct water level.
- Only run the dishwasher when it's full.
- Use water-efficient appliances (look for the WaterSense label).
- Use water-friendly landscaping, such as native plants.
- When you do water your yard, water slowly, deeply, and less frequently. Water early in the morning and close to the ground.
  - From May 15 to September 1 of each year, an odd/even lawn sprinkling ban is in effect and it shall be prohibited to water between the hours of 11am to 5pm.
- Learn more
  - Minnesota Pollution Control Agency's Conserving Water webpage (https://www.pca.state.mn.us/living-green/conserving-water)
  - U.S. Environmental Protection Agency's WaterSense webpage (https://www.epa.gov/watersense)

Home Water Treatment

Overview

Most Minnesotans, whether they drink from a public water supply or a private well, have drinking water that does not need treatment for health protection. Water treatment units are best for improving the physical qualities of water—the taste, color, or odor.

No single treatment process can remove all substances in water. If you decide to install a home water treatment unit, choose a unit certified and labeled to reduce or remove the substance of concern. If there is more than one substance you want to remove from your water, you may need to combine several treatment processes into one system.

Even well-designed treatments systems can fail. You should continue to test your drinking water after you install a treatment unit. All home water treatment units need regular maintenance to work correctly. Regular maintenance may include changing filters, disinfecting the unit, or cleaning scale buildup. Always install, clean, and maintain a treatment unit according to the manufacturer's recommendations.

Learn more at Home Water Treatment (https://www.health.state.mn.us/communities/environment/water/factsheet/hometreatment.html).

Beware of Water Treatment Scams

False claims, deceptive sales pitches, or scare tactics have been used by some water treatment companies. Every person has a right to decide what is best for themselves and their family, and you may choose to install additional water treatment to further lower the levels of contaminants of emerging concern, chlorine, and other chemicals in your water. However, you should be cautious about purchasing a water treatment system. If you are considering the purchase of a home water treatment system, please read the Minnesota Department of Health's recommendations online at Warning: Beware of Water Treatment Scams (https://www.health.state.mn.us/communities/environment/water/factsheet/beware.html).

Additional Information

Emerging Contaminant-PFAS

- PFAS (per- and polyfluorinated alkyl substances) are a family of manmade chemicals that have been widely used since the 1940s in products such as Teflon, Scotchgard, microwave popcorn bags, various industrial applications, cosmetics and other consumer products. They have been called "forever chemicals" because they do not break down in the environment.
- Two specific PFAS chemicals (PFOA and PFOS) were given a new MCL by the EPA on April 10, 2024. With that action, 5 out of 6 Hastings' wells are now above the allowable drinking water standard for PFAS. Historically, Hastings met MDH guidance for PFAS since the first consistent detections of PFOA started in 2011.
- For most adults, the health risks from drinking water with PFAS concentrations near the EPA MCLs are expected to be low. MDH's Health-Based Values were set to protect the most vulnerable population – such as pregnant mother/fetus, children (still developing), and those with compromised health. Those concerned with their health can take steps towards reducing their overall PFAS exposure. We recommend you consult your medical provider to determine if your exposure requires home filtration or an alternative source of water (bottled water).
- Hastings City Council has made water treatment the number one priority of the City and has taken steps to mitigate PFAS from our drinking water. Design of 3 decentralized treatment plants is under way with the commitment to having removal of PFAS from our water supply within 5 years (or less) as required by EPA rule. The City continues to position itself for funding of these treatment plants set to begin construction in spring 2025.
- For more information, please visit www.hastingsmn.gov/PFAS, or contact Public Works Director Ryan Stempski, Email: rstempski@hastingsmn.gov or Phone: 651-480-2368