



2017 DRINKING WATER REPORT

For Non-English Speaking Customers:

This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.

Información importante. Si no la entiende, haga que alguien se la traduzca ahora.

Daim ntawv teev num no muaj cov ntaub ntawv tseem ceeb hais txog koj cov dej haus. Nrhiav ib tug neeg pab txhais cov ntaub ntawv no rau koj, lossis tham nrog ib tug neeg uas paub cov lus no.

Source Water

Your drinking water in Moorhead comes from the following groundwater and surface water sources—surface water drawn from the Red River and seven wells ranging from 114 to 273 feet deep that draw water from the Quaternary Buried Unconfined and Quaternary Buried Artesian aquifers.

Moorhead Public Service (MPS) works diligently to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The results of monitoring done on MPS' drinking water for the period from January 1 to December 31, 2017, are issued in this Consumer Confidence Report (CCR). The purpose of this report is to provide you with information about your drinking water and how to protect our precious water resources.

Please contact MPS' Water Plant Supervisor Marc Pritchard at 218-477-8070 or at mpritchard@mpsutility.com with any questions you have about Moorhead's drinking water. You can also request information on how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency (EPA) 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

Monitoring Results

This report contains MPS' monitoring results from January 1 to December 31, 2017.

MPS works 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 at Minnesota Department of Health's Web page on the "Basics of Monitoring and Testing of Drinking Water in Minnesota":

<http://www.health.state.mn.us/divs/eh/water/factsheet/com/sampling.html>

How to Read the Water Quality Data Tables

The tables in this report show the contaminants found in 2017, or the most recent time that samples were collected for that contaminant. The tables also show the levels of those contaminants and the EPA's limits. Substances that MPS tested for but did not find are not included in the tables.

MPS collects samples less than once a year for certain contaminants because their levels in water are not expected to change from year-to-year. If MPS found any of these certain contaminants in the last samples that were collected, they are included in the tables herein with the detection date.

MPS and/or the Minnesota Department of Health may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of the results of this additional monitoring, call the Minnesota Department of Health at 651-201-4700 or 800-818-9318 between 8:00 AM and 4:30 PM, Monday through Friday.

Definitions

- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **EPA:** Environmental Protection Agency
- **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.
- **Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system.
- **Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in the water system on multiple occasions.
- **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.
- **NA (Not applicable):** Does not apply.
- **NTU (Nephelometric Turbidity Units):** A measure of the cloudiness of the water (turbidity).
- **pCi/l (picocuries per liter):** A measure of radioactivity.
- **ppb (parts per billion):** One part per billion in water is equivalent to 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 equivalent to 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.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- **Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Water Quality Data Tables

LEAD AND COPPER – Tested at customer taps.						
Contaminant (Date included if sampled in previous year)	EPA’s Action Level	EPA’s Ideal Goal (MCLG)	90% of Results Were Less Than	Number of Homes with High Levels	Violation	Typical Sources
Lead (08/01/16)	90% of homes less than 15 ppb	0 ppb	4.9 ppb	0 out of 31	NO	Corrosion of household plumbing.
Copper (08/01/16)	90% of homes less than 1.3 ppm	0 ppm	0.07 ppm	0 out of 31	NO	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.						
Contaminant (Date included if sampled in previous year)	EPA’s Limit (MCL)	EPA’s Ideal Goal (MCLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Arsenic	10.4 ppb	0 ppb	1.03 ppb	N/A	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Nitrate	10.4 ppm	10 ppm	0.57 ppm	N/A	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Water Quality Data Tables (continued)**CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.**

Substance (Date included if sampled in previous year)	EPA's Limit (MCL or MRDL)	EPA's Ideal Goal (MCLG or MRDLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Bromate	10 ppb	0 ppb	4.3 ppb	0.0 to 8.6 ppb	NO	Byproduct of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	2.29 ppm	1.9 to 2.4 ppm	NO	Water additive used to control microbes.
Total Trihalomethanes (TTHMs)	80 ppb	N/A	0.8 ppb	0 to 1.2 ppb	NO	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA)*	60 ppb	N/A	6.3 ppb	1.2 to 4.9 ppb	NO	By-product of drinking water disinfection.

*Total HAA refers to HAA5.

OTHER SUBSTANCES – Tested in drinking water.

Substance (Date included if sampled in previous year)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Fluoride	4.0 ppm	4.0 ppm	0.7 ppm	0.62 - 0.73 ppm	NO	Erosion of natural deposits; Water additive to promote strong teeth.

TREATMENT INDICATOR – Tested during treatment.

Substance	Removal Required	Lowest Monthly Percent of Results in Compliance	Highest Test Result	Violation	Typical Sources
Turbidity	Treatment Technique	100%	0.21 NTU	NO	Soil runoff.

DETECTED IN RAW SURFACE WATER - Tested before treatment.

Substance	Highest Level Allowed	Highest Level Detected (oocysts/L)	Range Detected	Average Level (oocysts/L)	Violation	Typical Sources
Cryptosporidium	N/A	0.300 oocysts/L	0.100 to 0.300	0.021 oocysts/L	NO	Human and animal fecal waste.

Water Quality Data Tables (continued)

DISINFECTION BYPRODUCT INDICATOR – Tested in source water and in drinking water.					
Substance	Removal Required	Range of Percent Removal Achieved	Average of Percent Removal Achieved	Violation	Typical Sources
Total Organic Carbon	Variable	46 to 73%	64%	NO	N/A

The percentage of Total Organic Carbon (TOC) removal was measured each month. The system met all TOC removal requirements, unless there is a "YES" in the Violation column.

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 a concentration between 0.5 to 1.5 parts per million (ppm), with an optimal fluoridation goal between 0.7 and 1.2 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.

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

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

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 MPS 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 <http://www.health.state.mn.us/divs/eh/water/swp/swa/> or call 651-201-4700 or 1-800-818-9318 between 8:00 AM and 4:30 PM, 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. MPS provides 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 to 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 watermain 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. 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 at:
<http://www.health.state.mn.us/divs/eh/water/factsheet/com/poulead.html>

Learn more:

- Visit <http://www.health.state.mn.us/divs/eh/water/contaminants/lead.html#Protect>.
- Visit <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 <http://www.health.state.mn.us/divs/eh/lead/sources.html>.



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