DRINKING WATER INFORMATION

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. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operation 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

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

- How Duluth 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.

SPECIAL HEALTH INFORMATION

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 healthcare 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:

1-800-426-4791
http://www.epa.gov/safewater

THE WATER YOU DRINK

FLOURIDE

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.

LEAD

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. Duluth provides high quality drinking water, but it cannot control the plumbing materials used in private buildings. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead. You may also visit www.comfortsystemsduluth.com/media/504346/Lead-education_edited.pdf for more information specific to the City of Duluth.

City of Duluth

2017 Drinking Water Quality Report

The City of Duluth Public Works and Utilities staff strives to provide safe, quality drinking water and high quality service to residents. We encourage you to contact us and tell us about your water quality and service. We also encourage water customers to learn more about drinking water quality issues. If you have questions or want information about opportunities for public participation in decisions that may affect water quality, please contact the Duluth Public Works and Utilities chemist, Lindsey Seifert-Monson, at 218-730-4160.

PWSID: 169001

DRINKING WATER REPORT

The City of Duluth is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2017. The purpose of this report is to inform consumers on laboratory testing of the drinking water and heighten awareness of the need to protect precious water resources.

RESULTS OF MONITORING

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

LAKE SUPERIOR SUPPLIES DULUTH WITH DRINKING WATER

The source water supply for the City of Duluth is a surface water source: Lake Superior. The Minnesota Department of Health has determined that one or more sources of your drinking water are susceptible to contamination. If you wish to obtain the entire source water assessment, find it at Source Water Assessments (www.health.state.mn.us/divs/eh/water/swp/swa/) or call 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

DULUTH DRINKING WATER TABLE FOR 2017

Detected Substance (units) **MCL** (highest level allowed in water by EPA) **MCLG** (level where there is no known health risk)	Results for Duluth Tap Water Level Found Average/ Result*	 Range of Detections	Typical Source of Substance in Drinking Water
Inorganic substances: minerals, salts, and metals with natural and man-made origins			
Fluoride (ppm) MCL: 4.0; MCLG: 4.0	0.73	0.69-0.74	MN requires municipal systems to add fluoride to promote strong teeth; erosion of natural deposits; fertilizer and aluminum factory discharge.
Nitrate MCL: 10 (as Nitrogen) MCLG: 10 (ppm)	0.32	N/A	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks and sewage.
Chlorine as chloramine (ppm) MRDL: 4.0; MRDLG: 4.0	Highest Quarterly Avg. 0.88	Highest and Lowest Monthly Avg. 0.56-1.04	Water additive used to control microbes.
Copper (ppm) (6/20/17) AL: 1.3 (90% of samples must be <1.3ppm) MCLG: 1.3	90% level 0.05	0 out of 30 sites over AL >1.3ppm	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (ppb) (6/20/17) AL: 15 (90% of samples must be <15ppb) MCLG: 0	90% level 9.2	1 out of 30** sites over AL >15ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Turbidity (NTU) MCLG: N/A; MCL: TT	17**	98%***	Soil runoff. Turbidity is a measure of water clarity. It is a good indicator of filtration effectiveness.
Organic substances: usually of man-made origin			
TTHM (Total Trihalomethanes) (ppb) MCL: 80; MCLG: 0	15.9	9.00-26.90	By-product of drinking water disinfection.
Haloacetic Acids (ppb) MCL: 60; MCLG: 0	14.1	6.20-29.00	By-product of drinking water disinfection.
Total Organic Carbon	Zero quarters out of compliance.	21-23% removal achieved.	Naturally present in the environment.
Cryptosporidium****	0.01 oocysts/L	0.200 oocysts/L	Human and animal fecal waste.

**Highest single measurement.
***Lowest monthly percentage of samples meeting limits.

*This is the value used to determine compliance with federal standards. ****Found in raw source water tested before treatment.

HOW TO READ THE WATER QUALITY DATA TABLES

The tables on the left 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 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

OTHER DEFINITIONS:

AL ~ Action Level
The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

pCi/L ~ PicoCuries per liter
A measure of radioactivity.

TT ~ Treatment Technique
A required process intended to reduce the level of contaminants in drinking water.

ppb ~ Part per billion
Also expressed as micrograms per liter (ug/l).

ppm ~ Part per million
Also expressed as milligrams per liter (mg/l).

MRDL ~ Maximum Residual Disinfectant Level

MRDLG ~ Maximum Residual Disinfectant Level Goal

NTU ~ Nephelometric Turbidity Units
Used to measure clarity in drinking water.

N/A ~ Not applicable/Does not apply

EPA ~ Environmental Protection Agency

Level 1 Assessment
A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment
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 our water system on multiple occasions.

PWSID ~ Public Water System Identification

Variances and Exemptions
State or EPA permission not to meet an MCL or a treatment technique under certain conditions.