

## 2018 City of Plymouth drinking water report

### Making Safe Drinking Water

City of Plymouth drinking water comes from groundwater sources – 17 wells ranging from 302 to 473 feet deep that draw water from the Prairie Du Chien-Jordan, Prairie Du Chien Group and Jordan aquifers.

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

Contact Streets & Utilities Manager Joe Paumen at 763-509-5993 or [jpaumen@plymouthmn.gov](mailto:jpaumen@plymouthmn.gov) with questions about Plymouth's drinking water or for information about taking part in decisions that may affect water quality.

The Environmental Protection Agency sets safe drinking water standards. These standards limit the amount of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

### Plymouth Monitoring Results

This report contains monitoring results from Jan. 1 to Dec. 31, 2018. Plymouth 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 people from substances that may be harmful to their health.

Learn more by visiting the MDH website, <https://health.state.mn.us/communities/environment/water/factsheet/sampling.html>.

### How to Read Water Quality Data Tables

The tables below show the contaminants found last year or the most recent time that contaminant was sampled. They also show the levels of those contaminants and the EPA's limits. Substances that were tested for but not found are not included in the tables.

Some contaminants are sampled for less than once a year because their levels in water are not expected to change from year to year. If these contaminants were found the last time they were sampled for, they are included in the tables below with the detection date.

Additional monitoring may have been completed for contaminants that are not included in the Safe Drinking

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## Water quality data tables

### Monitoring Results – Regulated Substances

Lead and Copper – Tested at Customer Taps						
Contaminant (Date, 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
Copper (7/11/18)	90% of homes less than 1.3 ppm	0 ppm	1.1 ppm	2 out of 30	No	Corrosion of household plumbing
Lead (7/11/18)	90% of homes less than 15 ppb	0 ppb	2.5 ppb	0 out of 30	No	Corrosion of household plumbing

Inorganic and Organic Contaminants – Tested in Drinking Water						
Contaminant (Date, 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
Gross Alpha	15.4 pCi/l	0 pCi/l	8.3 pCi/l	4.1 - 8.3 pCi/l	No	Erosion of natural deposits
Combined Radium	5.4 pCi/l	0 pCi/l	3.1 pCi/l	1.3 - 3.1 pCi/l	No	Erosion of natural deposits

Contaminants Related To Disinfection – Tested In Drinking Water						
Substance (Date, 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
Total Trihalomethanes (TTHMs)	80 ppb	N/A	10.8 ppb	8.9 - 10.8 ppb	No	Byproduct of drinking water disinfection
Total Chlorine	4 ppm	4 ppm	0.77 ppm	0.62 - 0.88 ppm	No	Water additive used to control microbes
Total Haloacetic Acids (HAA) <i>Total HAA refers to HAA5</i>	60 ppb	N/A	6 ppb	4.8 - 6 ppb	No	Byproduct of drinking water disinfection

Other Substances – Tested In Drinking Water						
Substance (Date, 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 ppm	4 ppm	0.76 ppm	0.6 - 0.69 ppm	No	Erosion of natural deposits; water additive to promote strong teeth

### 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

**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 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.

**NTU (Nephelometric Turbidity Units):** A measure of the cloudiness of the water (turbidity).

**NA (Not applicable):** Does not apply.

**pCi/l (picocuries per liter):** A measure of radioactivity.

**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.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

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

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Water Act. To request a copy of these results, call the MDH at 651-201-4700 or 1-800-818-9318 between 8 a.m. and 4:30 p.m. Monday-Friday.

### Potential Health Effects, Corrective Actions

**Copper:** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

### 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 those with cancer undergoing chemotherapy, those 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. Developing fetuses and 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 and Prevention 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.

### Lead in Drinking Water

Consumers may be in contact with lead through paint, water, dust, soil, food, hobbies or a job. Coming in contact with lead may cause serious health problems for anyone. There is no safe level of lead. Babies, children under 6 years and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can enter drinking water as it passes through lead service lines and household plumbing. Plymouth provides high quality drinking water, but cannot control the plumbing materials used in private buildings. The following are ways to protect against lead in drinking water.

**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. Those with lead service lines should let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to a home.

Residents may determine whether they have a lead service line by emailing Plymouth's Utilities Division at [publicworks@plymouthmn.gov](mailto:publicworks@plymouthmn.gov) or by visiting [mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home](http://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 exposure.

**Use cold water** for drinking, making food and making baby formula. Hot water releases more lead from pipes than cold water.

**Test the water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in drinking water. Residents concerned about lead should arrange with a laboratory to test their tap water. Testing the water is important for households where young children or pregnant women drink tap water.

Contact an MDH accredited laboratory to get a sample container and instructions on how to submit a sample: <https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam>. MDH can help residents understand the test results.

**Treat the water** if a test shows water has high levels of lead after letting the water run.

Read about water treatment units at <https://health.state.mn.us/communities/environment/water/factsheet/poulead.html>.

#### Learn more:

- Visit <https://health.state.mn.us/communities/environment/water/contaminants/lead.html>
- Visit [epa.gov/safewater/lead](http://epa.gov/safewater/lead)
- Call the EPA Safe Drinking Water Hotline at 1-800-426-4791. To learn about how to reduce contact with lead from sources other than drinking water, visit <https://health.state.mn.us/communities/environment/lead/sources.html>.

## Water monitored for unregulated substances

In addition to testing drinking water for contaminants regulated under the Safe Drinking Water Act, drinking water is sometimes monitored for contaminants that are not regulated. Unregulated contaminants do not have legal limits for drinking water.

Detection alone of a regulated or unregulated contaminant should not cause concern. The meaning of a detection should be determined in consideration of current health effects information, which may change through ongoing study.

The table below shows the unregulated contaminants detected last year, as well as human-health based guidance values for comparison, where available. The comparison values are based only on potential health impacts and do not consider the ability to measure contaminants at low concentrations or the cost and technology of prevention and/or treatment. They may be set at levels that are costly, challenging, or impossible for water systems 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 comparison value would be at little or no risk for harmful health effects. If the level of a contaminant is above the comparison value, people of a certain age or with special health conditions – such as fetuses, infants, children, elderly and people with impaired immunity – may need to take extra precautions.

Because these contaminants are unregulated, EPA and MDH require no particular action based on detection of an unregulated contaminant. Unregulated contaminant detection is included in this publication for public education purposes.

More information is available on the MDH website at <https://health.state.mn.us/communities/environment/water/contaminants/index.html> and <https://health.state.mn.us/communities/environment/water/com/ucmr4.html>.

### Monitoring Results – Unregulated Substances

Unregulated Contaminants – Tested in Drinking Water			
Contaminant	Comparison Value	Highest Average Result or Highest Single Test Result	Range of Detected Test Results
Manganese	100 ppb	3.42 ppb	2.61 - 3.42 ppb
Group of 6 Haloacetic Acids (HAA6Br)	N/A	9.1 ppb	8.24 - 10.37 ppb
Group of 9 Haloacetic Acids (HAA9)	N/A	27.95 ppb	23.14 - 31.94 ppb
Sodium*	20 ppm	19.6 ppm	13.9 - 19.6 ppm
Sulfate	500 ppm	25.5 ppm	12.9 - 25.5 ppm

\*Note that home water softening can increase the level of sodium in water.

### Weekly Independent Water Tests

City of Plymouth water is tested weekly by an independent, state-certified laboratory and the results are submitted to the Minnesota Department of Health.

Public water supplies are regularly tested for more than 100 contaminants that can cause health concerns, such as bacteria, nitrates, pesticides, solvents and metals.

Water plant operators also test the water multiple times per day for appropriate chemical levels and water quality.

### Water Restrictions in Effect

City of Plymouth has restrictions on outdoor water use from May through September.

Plymouth prohibits outdoor lawn watering from noon to 5 p.m. on all days. At other times, water customers must follow an odd-even schedule when sprinkling lawns.

Irrigation systems should be adjusted accordingly. For exceptions and more information, call 763-509-5512 or visit [plymouthmn.gov/watering](http://plymouthmn.gov/watering).

### Learn More About 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, which supplies 75% 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% of Minnesota's drinking water.

Contaminants can get in drinking water sources from the natural environment and 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 (rock and soil), oil and gas production, mining and farming operations, urban storm water runoff and wastewater discharges.
- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban storm water 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 storm water runoff and septic systems.
- **Radioactive contaminants**, such as radium, thorium, and uranium isotopes, come from natural sources (radon gas from soils and rock), mining operations, and oil and gas production.

MDH provides information about Plymouth's drinking water sources in a source water assessment, including how Plymouth is protecting drinking water sources, nearby threats to drinking water sources, and 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.

For the source water assessment, visit the MDH website at <https://health.state.mn.us/communities/environment/water/swp/swa> or call 651-201-4700 or 1-800-818-9318 between 8 a.m. and 4:30 p.m. Monday-Friday.