2018 Drinking Water Report

As required by the federal Safe Drinking Water Act, the City of Woodbury is issuing the results of monitoring done on its drinking water from Jan. 1 to Dec. 31, 2018. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect water resources. The city works with the Minnesota Department of Health (MDH) to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts.

We are proud to report that no contaminants were detected at levels that violated state and federal drinking water standards in 2018.

No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health. More information regarding MDH's sampling can be found at **www.health.state.mn.us/communities/environment/water/factsheet/sampling**.

Any questions about this report can be directed to Jim Westerman, utilities manager, at 651-714-3720 or **jim.westerman@woodburymn.gov**.

Inside this report...

CITY OF Woodbury

Making Safe Drinking Water

Your drinking water comes from a groundwater source: nineteen wells ranging from 380 to 540 feet deep that draw water from the Jordan aquifer.

Woodbury 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 Jim Westerman, at **651-714-3720** or **jim.westerman@woodburymn.gov** if you have questions about Woodbury's drinking water. You also can ask for information about 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 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**.

Water Use in Woodbury

In 2018, residents and businesses in Woodbury used nearly 2.6 billion gallons of water. This works out to an average of about 7.1 million gallons of water per day (MGD). A typical Woodbury family consumes approximately 22,500 gallons of water each quarter of the year, on average. Water use is lower than average during the winter months (approximately 4.5 MGD), and higher in the summer (approximately 12-15 MGD), primarily due to lawn watering. The maximum daily summer usage during 2018 was 17 million gallons.

How to Read the Data Tables

The tables on the following pages show the contaminants found last year (2018) or the most recent time that they were sampled for. They also show the levels of those contaminants and the EPA's limits. Substances that were tested for but were not found are not included in the tables.

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

There may have been additional monitoring for contaminants that are not included in the Safe Drinking 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 through Friday.

Abbreviations and 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 our 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 our 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.
- **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).
- **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.

Monitoring Results

Lead and Copper

Tested at customer taps. The city tests for lead and copper every three years by collecting water samples from a representative set of households in the city. The test results in the following data chart are from July 2017.

Contaminant	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	90% of homes less than 1.3 ppm	0 ppm	0.2 ppm	0 out of 30	No	Corrosion of household plumbing.
Lead	90% of homes less than 15 ppb	0 ppb	4.1 ppb	0 out of 30	No	Corrosion of household plumbing.

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. Woodbury 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 30-60 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: **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 at **www.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 at **www.health.state.mn.us/communities/environment/water/factsheet/poulead**.

Learn more:

- Visit Lead in Drinking Water at **www.health.state.mn.us/communities/environment/water/contaminants/lead**.
- Visit Basic Information about Lead in Drinking Water at **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 at **www.health.state.mn.us/communities/environment/lead/sources**.

Contaminants Related to Disinfection

Tested in drinking water.

Substance	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	7.1 ppb	6.40 - 7.10 ppb	No	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA)*	60 pb	N/A	0 ppb	0 - 1.20 ppb	No	By-product of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.67 ppm	0.46 - 0.77 ppm	No	Water additive used to control microbes.

*Total HAA refers to HAA5

Inorganic and Organic Contaminants

Tested in drinking water.

Contaminant (Test Date, if applicable)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Barium	2 ppm	2 ppm	0.08 ppm	0.0220 - 0.0816 ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Selenium	50 ppb	50 ppb	5.89 ppb	N/A	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Nitrite Nitrogen, Total	1.4 ppm	1 ppm	0.13 ppm	0.01 - 0.13 ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Arsenic	10.4 ppb	0 ppb	1.77 ppb	N/A	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Gross Alpha	15.4 pCi/l	0 pCi/l	8.8 pCi/l	0 - 9.8 pCi/l	No	Erosion of natural deposits.
Combined Radium	5.4 pCi/l	0 pCi/l	2 pCi/l	0 - 2.4 pCi/l	No	Erosion of natural deposits.
Nitrate	10.4 ppm	10 ppm	2.5 ppm	0.05 - 2.50 ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Other Substances

Tested in drinking water.

Substance	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	0.81 ppm	0.73 - 0.92 ppm	No	Erosion of natural deposits; Water additive to promote strong teeth.

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.

Unregulated Substances

Tested in drinking water.

Contaminant	Comparison Value	Highest Average or Highest Single Test Result	Range of Detected Test Results
Sodium*	20 ppm	6.99 ppm	N/A
Sulfate	50 ppm	23.3 ppm	N/A

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

In addition to testing drinking water for contaminants regulated under the Safe Drinking Water Act, we sometimes also monitor 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 considering current health effects information. We are often still learning about the health effects, so this information can change over time.

The following table shows the unregulated contaminants we 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 our ability to measure contaminants at very 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–like a fetus, 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. We are notifying you of the unregulated contaminants we have detected as a public education opportunity.

More information is available on MDH's A-Z List of Contaminants in Water at **www.health.state.mn.us/communities/environment/water/contaminants** and Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) at **www.health.state.mn.us/communities/environment/water/com/ucmr4**.

Vulnerability

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**.

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 Woodbury 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 **www.health.state.mn.us/divs/eh/water/swp/swa** or call **651-201-4700** or **1-800-818-9318** between 8 a.m. and 4:30 p.m., Monday through Friday.

PFAS Update

Monitoring for perfluoroalkyl substances (PFAS) is not required as part of the Safe Drinking Water Act. However, MDH has been monitoring City of Woodbury municipal wells for PFAS since the early 2000s, and we've continued to update the public about changes in the PFAS testing results when needed and as part of this annual drinking water report.

On April 4, the Minnesota MDH issued new Health-Based Guidance Values (HBVs) for two chemicals associated with groundwater contamination in the east metro area. MDH set the new values for the two PFAS–PFOS and PFHxS–after reviewing the latest scientific data.

The new PFOS value of 15 parts per trillion (ppt) replaces the 2017 value of 27 ppt. Only recently has enough scientific data been available to derive a value for PFHxS; the new HBV for PFHxS is 47 ppt. It replaces MDH's previous approach of using the previous PFOS HBV of 27 ppt as a "surrogate" for PFHxS, The HBVs are based on daily consumption over a lifetime.

For Woodbury, these changes in HBVs impact one water production well (based on the most recent water sampling results). This well is one of the city's five wells previously identified as impacted by PFAS. These wells are only needed when water demand is high during summer months; when they are in operation, they are used as sparingly as possible and in a rotation with other wells that are not impacted by PFAS. Because of these existing operational changes, MDH indicated to city staff that no additional operational changes to the city's water system are needed at this time. The water remains safe to drink.

Details about the history of PFAS in Woodbury wells and testing results through 2018 are available on the city's website at **woodburymn.gov/pfas**. Additional resources are also available on the MDH and Minnesota Pollution Control Agency websites.