



City of  
Maple Grove

# Water Quality Report

# 2019



**763.494.6370**

The City of Maple Grove is issuing the results of monitoring done on its drinking water for the period from **January 1 to December 31, 2019**. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

This report contains very important information. Translate or ask someone who understands it. Información importante. Si no la entiende, haga que alguien se la traduzca ahora. Nov yog ntaub ntauv tseem ceeb. Yog koy tsi to taub, nrhiv neeg pab txhais rau koh kom sai sai.

## We are proud to present to you our **2019 City of Maple Grove Water Quality Report.**

Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. Drinking water is a precious resource. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation and community education while continuing to serve the needs of all our water users.

### **IMPORTANT CONTACT INFORMATION**

The **Maple Grove Utility Department** is located at 9030 Forestview Lane North and can provide information or assistance for the following services:

- Leak at water meter or meter horn
- Water leak outside or at curb stop
- Hydrant maintenance or repairs
- Frozen meters or water lines
- Water quality/hardness
- Water treatment plant tours
- Watermain flushing
- Low water pressure
- Turn off at outside curb stop
- Sewer gas odor
- Sewer backup
- Water conservation kit

Office hours are Monday – Friday from 7:30 a.m. – 4:00 p.m. Please contact this office at **763.494.6370** during business hours or for **after hour water and sewer emergencies**.

The **Maple Grove Utility Billing Department** is located in the Finance Department at the Maple Grove Government Center at 12800 Arbor Lakes Parkway and can provide information or assistance for the following services:

- Utility rates and billing questions
- Change in owner/renter
- Mailing address changes
- Information on reading your water meter
- Winterizing your water system
- Auto payment options

Please contact this office at **763.494.6330** during business hours Monday – Friday from 8:00 a.m. – 4:30 p.m.



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**Making Safe Drinking Water**



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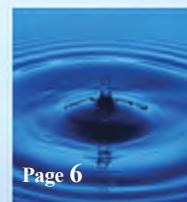
**Maple Grove Monitoring Results**

For the Year Ending December 31, 2019



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**Questions Often Asked About Your Water**

## **WATER SOURCE**

The City of Maple Grove provides drinking water to its residents from groundwater sources; primarily from 10 wells, 157 to 295 feet deep, developed in the surficial Glacial Drift aquifer. The City has another 2 wells developed in the Mt. Simon-Hinckley bedrock aquifer, used for emergency supply only. Total pumping capacity is 34,000 gallons per minute.

Raw water is pumped from the wells to the Maple Grove water treatment plant where it is treated to reduce iron and manganese content. Manganese content is reduced from .6 parts per million to .03 parts per million and iron content is reduced from .02 parts per million to .001 parts per million. These elements pose no health threat, however can cause water discoloration and staining. Raw water is also treated with chlorine and fluoride as required by the Minnesota State Health Department (MDH).

The treated water is then pumped into the distribution system having two elevated water towers and ground storage reservoir with combined capacity of 10.5 MG. The storage

tanks provide for water pressure, peak day demand, and fire protection. Maple Grove Public Water Supply system provides about 2.8 BGY treated water to Maple Grove, Osseo, Corcoran, and Dayton.

Minnesota Department of Health source water assessment identifies the Drift aquifer wells as vulnerable to contamination. To obtain the MDH source water assessment, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. It can be viewed online at: [www.health.state.mn.us/divs/eh/water/swp/swa](http://www.health.state.mn.us/divs/eh/water/swp/swa). Maple Grove Wellhead Protection Plan identifies Drift aquifer recharge management area, potential contamination sources, and management practices.

The City of Maple Grove Utility Department employees are committed to respond to the needs of the citizens of our community in a timely and professional manner. Water and Sewer Department vehicles are blue in color and utility personnel carry Maple Grove photo identification cards.

## Making Safe Drinking Water

Your drinking water comes from a groundwater source: ten wells ranging from 157 to 295 feet deep, that draw water from the Quaternary Buried Artesian and Quaternary Water Table aquifers.

Maple Grove 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 Mark Nelson, Utilities Supervisor, at 763-494-6370 or [mnelson@maplegrovern.gov](mailto:mnelson@maplegrovern.gov) if you have questions about Maple Grove's 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.

## 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.

## Maple Grove Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2019. 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) (<https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html>).

## How to Read the Water Quality Data Tables

The tables (shown on page 4) 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.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirement 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.

**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.

**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 (ug/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

## Monitoring Results – Unregulated Substances

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 Unregulated Contaminants table (shown on page 4) 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](https://www.health.state.mn.us/communities/environment/water/contaminants/index.html) (<https://www.health.state.mn.us/communities/environment/water/contaminants/index.html>) and [Fourth Unregulated Contaminant Monitoring Rule \(UCMR 4\)](https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html) (<https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html>).

## 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
<b>Lead</b>	0 ppb	90% of homes less than 15 ppb	2 ppb	0 out of 30	No	Corrosion of household plumbing.
<b>Copper</b>	0 ppm	90% of homes less than 1.3 ppm	1.05 ppm	1 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
<b>Nitrate</b>	10 ppm	10.4 ppm	0.09 ppm	0.00 - 0.09 ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<b>Trichloroethylene (TCE)</b>	0 ppb	5 ppb	0.47 ppb	N/A	No	Discharge from metal degreasing sites and other factories.
<b>Combined Radium (2018)</b>	0 pCi/l	5.4 pCi/l	1 pCi/l	N/A	No	Erosion of natural deposits.

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
<b>Total Trihalomethanes (TTHMs)</b>	N/A	80 ppb	14.6 ppb	12.40 - 14.60 ppb	No	By-product of drinking water disinfection.
<b>Total Haloacetic Acids (HAA)</b>	N/A	60 ppb	2.5 ppb	2.30 - 2.50 ppb	No	By-product of drinking water disinfection.
<b>Total Chlorine</b>	4.0 ppm	4.0 ppm	0.36 ppm	0.31 - 0.45 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
<b>Fluoride*</b>	4.0 ppm	4.0 ppm	0.74 ppm	0.57 - 0.77 ppm	No	Erosion of natural deposits; water additive to promote strong teeth.

UNREGULATED CONTAMINANTS – Tested in drinking water.			
Contaminant	Comparison Value	Highest Average Result or Highest Single Test Results	Range of Detected Test Results
<b>Manganese</b>	100 ppb	6.4 ppb	N/A
<b>Sodium**</b>	20 ppm	27.8 ppm	N/A
<b>Sulfate</b>	500 ppm	52.2 ppm	N/A
<b>Group of 6 Haloacetic Acids (HAA6Br)</b>	N/A	6.9 ppb	6.89 - 6.91 ppb
<b>Group of 9 Haloacetic Acids (HAA9)</b>	N/A	7.52 ppb	7.47-7.58 ppb

### \*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.

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

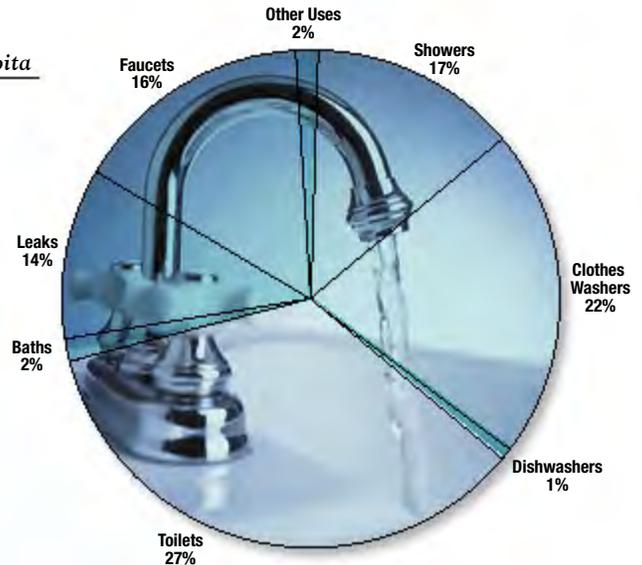
# Home Water Use – Know The Facts

When we scan our quarterly water bill and see the number of gallons we have used in the past ninety days, do we consider where in our household the water use occurred? A little insight into typical home water use can shed light on how we use water and how we can take steps to use it more efficiently. According to the *Handbook of Water Use and Conservation* by Amy Vickers, daily indoor per capita water use in the typical single family home is 69.3 gallons.

## Water Use Breakdown

Use	Gallons Per Capita
Showers.....	11.6
Clothes Washers.....	15.0
Dishwashers.....	1.0
Toilets .....	18.5
Baths .....	1.2
Leaks.....	9.5
Faucets .....	10.9
Other Domestic Uses.....	1.6

*Reprinted from American Water Works Association*



## 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 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 (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 Maple Grove 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 or 1-800-818-9318 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. Maple Grove 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: (<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>).

# Questions Often Asked About Your Water



## What chemicals are added to the water?

**Chlorine** is added to the water for purposes of disinfection. Maple Grove maintains a .05 parts per million chlorine concentration.

**Fluoride** (for healthy teeth) is added to municipal water systems as required by the Minnesota Department of Health. Daily tests are conducted to insure maintenance of a .5-9 parts per million concentration. Test results are then submitted to the State of MN.

**Polyphosphate** (a food product) is added to the system at a ratio of 5 parts per million. Polyphosphates coat the inside diameter of water pipes, lowering the potential lead and copper concentrations.

## Is the water safe to drink?

Yes, the City's water is safe to drink. The City provides water from groundwater sources and uses treatment processes that disinfect and protect our drinking water.

The water meets or exceeds the State requirement of the Safe Drinking Water Act. Seventy (70) sample tests are taken from various locations each month to insure safety. In addition, the Minnesota Health Department performs a complete system test every eighteen months. Per the requirement of the United States Environmental Agency particular to the city, random samplings are conducted of lead and copper levels in residential water supplies. To date, all test results comply with the recommended guidelines set by this agency.

## What is causing the low pressure in my home?

Normally, low pressure is caused by a malfunctioning water softener. This can be confirmed by checking the pressure at an unsoftened inside or outside tap, or by putting the water softener on by pass (see your owners manual). If the pressure returns to normal, your softener may need repair. The average pressure in the city distribution system is approximately 75 pounds per square inch.

## Why is there sand in the water?

The sudden onset of particles which resemble sand are most often the result of a water softener malfunction. These particles collect in faucet screens, washer intake hose screens, and toilet tanks. Please check your owners manual or maintenance company for assistance.

## What is the hardness of the water?

The level is 25-28 grains or 428-479 parts per million hardness.

## Does the water treatment plant soften the water?

No, only iron and manganese are removed.

## Do we need to install a water softener in our home?

The hardness level of 25-28 grains is relatively high, therefore, the majority of homes and businesses in the community find it desirable to soften water through privately owned softeners or a softening service.

## The Pros and Cons of Home Water Softening

Water softeners are a water treatment device. They remove water hardness (dissolved calcium and magnesium). The decision to soften your water is a personal choice that can affect your home and the environment. It is important to understand your home's water quality. This will help you decide if a home water softener is necessary and choose the best treatment device(s). Water softeners must be installed and maintained properly to be safe and effective.

The *advantages* of home water softening include:

- Prevents build-up of minerals (scale) on the inside of pipes, fixtures, and hot water heaters.
- Lengthens the life of some appliances.
- Reduces or prevents mineral spots on glassware.
- Prevents or reduces soap films and detergent curds in sinks, bathtubs, and washing machines.

The *disadvantages* of home water softening include:

- Can corrode your pipes. The corroded metal from the pipes can end up in your water.
- Potential health implications from additional sodium from water softening.
- Regular testing of the water and maintenance of the softener is necessary to make sure the softener is working properly.
- Negative impacts to the environment from salt use.
- Water waste: 5% of the water that goes through a softener is not usable.

## 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.htm>).

## 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.
- Learn more:

Minnesota Pollution Control Agency's Conserving Water

(<https://www.pca.state.mn.us/living-green/conserving-water>)

U.S. Environmental Protection Agency's WaterSense

(<https://www.epa.gov/watersense>)

