EAGAN WATER REPORT

FOR THE YEAR 2022

EAGAN DRINKING WATER REPORT

The United States Congress and the Environmental Protection Agency (EPA) require all community water systems to annually report on the quality of the drinking water provided. At the City of Eagan, the goal is to supply residents with high-quality, safe, reliable drinking water that meets every federal and state water quality requirement. The City of Eagan is happy to report that its drinking water is safe.

This report, prepared by the City of Eagan Utility Division, contains information about the water source, treatment, consumer demand, contaminants detected and other information of interest.

NEED THIS TRANSLATED?

Call us at (651) 675-5000

¿Necesita esta traducido? Comuníquese con nosotros al (651) 675-5000

Ma u baahan tahay in tan la turjumo? Naga soo wac (651) 675-5000

Xav tau qhov no txhais los? Hu rau peb ntawm (651) 675-5000

EAGAN'S DRINKING WATER IS SAFE

Eagan 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. This report helps answer common questions people have about Eagan's water.

Eagan's Water Source

Your drinking water comes from a groundwater source: 22 wells ranging from 408 to 1075 feet deep that draw water from the Prairie Du Chien-Jordan, Mt. Simon and Jordan aquifers.

Making Safe Drinking Water

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.

DID YOU KNOW? 23.5 million gallons of water is available for storage for system capacity and to maintain pressure between five reservoirs. 351 miles of water main move finished water from wells, treatment plants, and reservoirs to your home.

Is Eagan's water hard?

Eagan's groundwater is similar to that of other nearby communities and is considered to be very hard, with a hardness of 18 to 20 grains, or 310 to 345 parts per million (ppm). Did you know that more than 85% of American homes have hard water?

What is "hard" water?

As water moves through soil and rock, it dissolves small amounts of minerals and holds them in solution. Dissolved calcium and magnesium are the two most common minerals that make water "hard." The degree of hardness becomes greater as the calcium and magnesium content increases.

Is hard water safe to drink?

"Hard" water is not a health hazard. In fact, the National Research Council (National Academy of Sciences) says hard drinking water generally contributes a small amount toward the total calcium and magnesium needed in the human diet. The council further states that in some instances, where dissolved calcium and magnesium are very high, water could be a major contributor of calcium and magnesium to the diet.

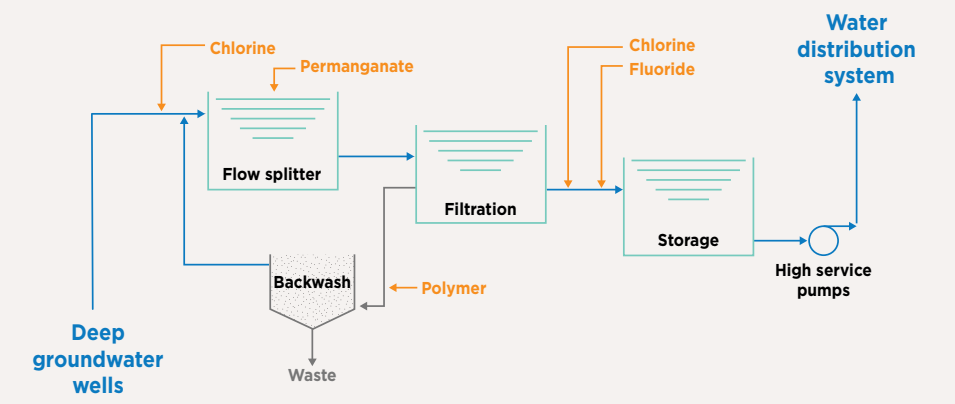
Is there a downside?

Hard water can be a nuisance because of mineral buildup on plumbing fixtures and poor soap and or detergent performance.

Why does pressure vary?

Water pressure (psi) is directly related to elevation. Eagan's topography varies from a low elevation of 688 feet near the Minnesota River to a high point of 1,086 feet in Lebanon Hills Regional Park. Eagan's standard pressure range is 43 to 80 psi. To meet this standard, the City is divided into six water pressure zones.

DRINKING WATER TREATMENT



Most community drinking water sources require treatment; Eagan's water source is no exception.

Iron and manganese are abundant in ground water throughout Minnesota. Although iron is not harmful to human health, water with iron concentrations greater than 0.3 ppm can be a nuisance in the home. Iron can leave rust colored stains on laundry, porcelain, and fixtures. Levels of manganese greater than 0.05 ppm can tint the water, cause black spots in ice cubes, and be the source of a bitter, metallic taste. Eagan has two treatment plants that remove iron and manganese so customers will not be troubled by the nuisance effects of these two materials.

Permanganate is used to oxidize iron and manganese, causing the minerals to become solid and easily filtered out. The permanganate solution also helps control taste and odor.

As required by the Minnesota Department of Health (MDH), chlorine and fluoride are added to the water. Chlorine is used to disinfect water. Regular monitoring for bacteria consistently confirms Eagan's water is safe. Fluoride is added to the City's drinking water at levels mandated by federal and state legislation. Fluoridated water has been proven to reduce tooth decay, especially in children, and promote stronger bones in all age groups. Fluoride levels are monitored on a daily basis to ensure the proper dosage is be added.

TREATMENT IMPROVES QUALITY

Component	Before treatment	After treatment
Iron	0.4 ppm	<0.1 ppm
Manganese	0.3 ppm	0.02 ppm
Chlorine	N/A	0.5 to 1.0 ppm
Fluoride	0.2 ppm	0.6 to 0.8 ppm

MORE ABOUT FLUORIDE

Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of 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 an optimal concentration between 0.5 to 0.9 parts per million (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.

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% 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 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 MDH provides information about your drinking water sources in a source water assessment, including:

- How Eagan is protecting your drinking water sources;
- 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 online or call 651-201-4700 from 8 a.m.–4:30 p.m., Monday–Friday.

THE VALUE OF WATER

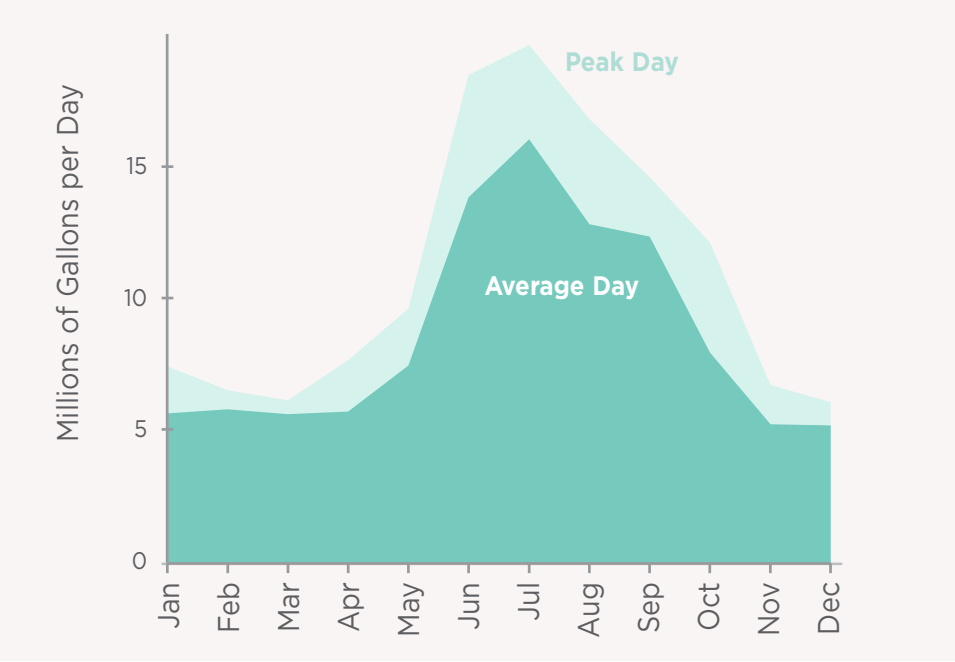
Drinking water is vital to health. Water is also key to manufacturing, agriculture, energy production, and more. One-fifth of the U.S. economy relies upon a reliable and clean source of water.

The State of Minnesota and the City of Eagan work to protect drinking water sources. We treat water to remove harmful contaminants. And we do extensive testing to ensure drinking water safety.

Water from a public water system like ours is tested more thoroughly and regulated more closely than water from any other source, including bottled water.

EAGAN'S WATER CONSUMPTION

In 2022, Eagan's Utility Division produced 3.16 billion gallons of safe, clean drinking water. The average annual daily demand was 8.7 million gallons, the average summer daily demand was 14.2 million gallons, and the peak day was 19.6 million gallons on July 22, 2022. The chart below shows the 2022 peak day and average day of water use.



HOW TO READ WATER QUALITY DATA TABLES

The tables below 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.

Some contaminants are monitored regularly throughout the year and rolling (or moving) annual averages are used to manage compliance. Because of this averaging, there are times where the Range of Detected Test Results for the calendar year is lower than the Highest Average or Highest Single Test Result, because it occurred in the previous calendar year.

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 MDH at 651-201-4700 from 8 a.m.–4:30 p.m., Monday–Friday.

EAGAN MONITORING RESULTS

This report contains our monitoring results from Jan. 1–Dec. 31, 2022.

LEAD AND COPPER — tested at customer taps

Contaminant (if previous date)	EPA's Action Level (90% of homes less than)	EPA's Ideal Goal (MCLG)	90% Results Were Less Than	Homes with High Levels	Violation	Typical Sources
Lead	90% of homes less than 15 ppb	0 ppb	3.3 ppb	0 out of 30	NO	Corrosion of household plumbing.
Copper	90% of homes less than 1.3 ppm	0 ppm	0.15 ppm	0 out of 30	NO	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS — tested in drinking water

Contaminant (Date, if previous)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test	Range of Detected Results	Violation	Typical Sources
Barium (2021)	2 ppm	2 ppm	0.2 ppm	N/A	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposit.
Gross Alpha (2019)	15.4 pCi/l	0 pCi/l	8.0 pCi/l	N/A	NO	Erosion of natural deposits.
Combined Radium (2019)	5.4 pCi/l	0 pCi/l	4.7 pCi/l	N/A	NO	Erosion of natural deposit.

CONTAMINANTS RELATED TO DISINFECTION — tested in drinking water

Contaminant (Date, if previous)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test	Range of Detected Results	Violation	Typical Sources
Total Haloacetic Acids (HAA)	60 ppb	N/A	8.80 ppb	0.00–8.80 ppb	NO	By-product of drinking water
Total Chlorine	4.0 ppm	4.0 ppm	0.72 ppm	0.68–0.78 ppm	NO	Water additive used to control microbes.
Total Trihalomethanes (TTHMs)	80 ppb	N/A	27.7 ppb	2.30–27.70 ppb	NO	By-product of drinking water disinfection.

OTHER SUBSTANCES — tested in drinking water

Contaminant (Date, if previous)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test	Range of Detected Results	Violation	Typical Sources
Fluoride	4.0 ppm	4.0 ppm	0.81 ppm	0.75–84 ppm	NO	Erosion of natural deposits; additive to promote strong teeth.

DRINKING WATER TESTING

The City of Eagan works with the MDH 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 MDH's webpage at Basics of Monitoring and Testing of Drinking Water in Minnesota.

PFAS SAMPLING IN EAGAN

The MDH has been studying the potential health impacts of per- and polyfluoroalkyl substances (PFAS) in groundwater in Minnesota since 2002. This project is part of a larger effort at MDH to sample all community water systems (CWSs) for PFAS compounds. MDH aims to cover 90% of CWS customers under its PFAS monitoring program by 2025. MDH calculates a cumulative measure of health risk of exposure to multiple PFAS compounds called the Health Risk Index (HRI).

In 2021, the City of Eagan finished drinking water was sampled as part of the Statewide PFAS Monitoring Project. The HRIs for Eagan samples is zero. A person drinking water at or below the guidance value would have little or no risk for health effects. Only one compound (Perfluorobutanoic acid or PFBA) was detected, significantly below the health-based guidance limit.

PFBA is one type of PFAS. This group of chemicals is commonly used in non-stick and stain-resistant consumer products, food packaging, fire-fighting foam, and industrial processes. PFBA moves easily through the environment and is widely detected in groundwater, surface water and in nature. PFBA is the most commonly detected PFAS in Minnesota waters and is commonly found in drinking water at low levels.

In 2023, the City of Eagan finished drinking water will again be sampled. In addition, wells not sampled in 2021 will be sampled to give a complete analysis of the water system.

TIPS TO LOWER UTILITY BILLS

These water-saving tips will help you save water and lower your utility bill.

- Identify toilet leaks by placing a dye tablet or a few drops of food coloring in the toilet tank. If any color shows up in the bowl within 15 minutes, you have a leak.
- Consider installing a toilet that uses 1.6 gallons per flush or less.
- Find and fix any leaky faucets. One drip per second can add up to 5 gallons of lost water per day.
- Consider replacing your washer with a high-efficiency one.
- Ensure your water softener's regeneration cycle is about two hours and takes place at night. Water softeners can be a major source of water usage.
- Install water-saving shower heads.
- Water gardens in the morning.
- Follow the City's odd/even watering requirements.
- If your water meter registers usage when all your water outlets are off, you have a leak somewhere.
- Call Utility Billing at (651) 675-5030 if you notice any spikes in usage.

DEFINITIONS

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

MDH: Minnesota Department of Health

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.

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 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.

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. Eagan provides high-quality drinking water, but the City cannot control the plumbing materials used in private buildings.

FOR PEOPLE WITH COMPROMISED IMMUNE SYSTEMS

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.

SERVICE LINE INVENTORY

Our system will be working to complete an inventory of the service line materials before October 16, 2024. The service line consists of the pipes that connect the water main to your home. Older homes may have materials such as lead in their service lines and this inventory will help us prioritize replacement of lead service lines in the future. We hope that customers will actively cooperate as we work to complete our inventory and we will make the information available once complete. For questions, please contact us.

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 Are your pipes made of lead? Here's a quick way to find out.
   - 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 an MDH-accredited laboratory to get a sample container and instructions on how to submit a sample: Environmental Laboratory Accreditation Program. The MDH 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 Home Water Treatment Fact Sheet.

Learn more

- Lead in Drinking Water
- Basic Information about Lead in Drinking Water
- 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 Common Sources of Lead.

WATER CONSERVATION REBATE PROGRAM

Use less water and save money by installing water-saving devices—and apply for rebates. Details at **cityofeagan.com/conservewater.**

PROS AND CONS OF HOME WATER SOFTENING

When considering whether to use a water softener, contact your public water system to find out if you have hard water. Many systems treat for hardness, making water softeners unnecessary.

Learn more at Home Water Softening FAQs.

The benefits of soft water

- Increased efficiency for soaps and detergents.
- Reduction in mineral staining
- A potential increase in the lifespan of water heaters.

The drawbacks of soft water

- Operation costs.
- More sodium. People on low-sodium diets should consult a doctor if they plan to regularly consume softened water.
- The production of salt brine which can have negative effects on treatment plants and on ecosystems. Reduce the amount of salt brine used or install a salt-free system.

HEALTH EQUITY AND DRINKING WATER AFFORDABILITY

Eagan is dedicated to insuring health equity and manageable water bills for our customers by increasing water use awareness and water conservation efforts.

The City partners with the Minnesota Department of Commerce to help customers with limited resources make payments to their water bills.

The Energy Assistance Program helps pay energy and water bills for eligible Minnesotans. The program is free and provides benefits of up to $1,400, plus additional support to respond to emergencies. To learn more visit MN Energy Assistance Program.

HOME WATER TREATMENT

Most Minnesotans' drinking water, whether from a public water supply or a private well, does not need additional treatment for health protection. Water treatment units can improve the physical qualities of water — the taste, color, or odor.

No single treatment process can remove all substances in water. If you decide to install a home water treatment unit, choose one certified and labeled to reduce or remove the substance of concern.

Even well-designed treatments systems can fail, so continue to test your drinking water after you install a treatment unit. All home water treatment units need regular maintenance to work correctly. This may include changing filters, disinfecting the unit, or cleaning scale buildup. Always install, clean, and maintain a unit according to the manufacturer's recommendations.

Learn more at Home Water Treatment Fact Sheet.

BEWARE OF WATER TREATMENT SCAMS

Some water treatment companies use false claims, deceptive sales pitches, or scare tactic. Be cautious about purchasing a water treatment system. Please read the MDH's recommendations online at Beware of Water Treatment Scams.

REDUCE BACKFLOW

Bacteria and chemicals can enter the drinking water supply in a process called backflow. **Backflow occurs at connection points between drinking water and non-drinking water supplies** due to water pressure differences.

For example, if a person sprays an herbicide with a garden hose, the herbicide could enter the home's plumbing and then enter the drinking water supply. This could happen if the water pressure in the hose is greater than the water pressure in the home's pipes.

Property owners can help prevent backflow. Pay attention to cross connections, such as garden hoses.

The MDH and American Water Works Association recommend the following:

- Do not submerge hoses in buckets, pools, tubs, or sinks and keep them clear of possible contaminants.
- Use spray attachments with a backflow prevention device.
- Use a licensed plumber to install backflow prevention devices.
- Maintain a vertical space between a water outlet and the flood level of a fixture.

HELP PROTECT OUR MOST PRECIOUS RESOURCE

WATER CONSERVATION IS ESSENTIAL TO OUR FUTURE WELL-BEING

Conservation is essential, even in the land of 10,000 lakes. In fact, parts of the metro area groundwater are being used faster than it can be replaced. Some agricultural regions are vulnerable to drought, which affects crop yields and municipal water supplies.

Water Wisely

These tips will help you and your family conserve — and save money.

- Fix running toilets.
- Turn off the tap while shaving or brushing your teeth.
- Shower instead of bathe.
- Only run full loads of laundry and dishes in the dishwasher.
- Use WaterSense appliances.
- Use native plants landscaping.
- Water your yard slowly, deeply, less often, and in early morning.

Learn more

- U.S. Environmental Protection Agency: WaterSense

Water Conservation Rebate

Conserve water and save money by installing water-saving devices. Eagan water customers can now apply for rebates for the purchase of WaterSense labeled and Energy Star qualified appliances.

Funding for this program is provided in part by the Metropolitan Council and Clean Water Land & Legacy Amendment's Water Efficiency Grant.

To learn more and to apply online visit: cityofeagan.com/conservewater.

Smart Irrigation Program

Eagan's Smart Irrigation Program helps the City to reduce annual water use and residents to save money on their irrigation systems.

Learn more and to apply online at cityofeagan.com/smart-irrigation-program.

GET INVOLVED

Eagan welcomes input on water quality issues. Contact Superintendent of Utilities Jon Eaton at 651-675-5200 or Utilities@CityofEagan.com.

Ask about how you can take part in decisions that may affect water quality. Learn more online at cityofeagan.com/utilities.

HELP KEEP WATER SOURCES POLLUTION-FREE

Many of our daily activities contribute to the pollution of Minnesota's surface water and groundwater. You can help protect these drinking water sources by taking the following actions:

- Limit use of herbicides, pesticides, and fertilizers on your property.
- Keep soil in place with plants, grass, or rocks.
- Cover temporary piles of dirt with a tarp or burlap sack.
- Keep leaves and grass off of streets and sidewalks.
- Maintain septic systems, wells, and storage tanks to prevent leaks. Seal any unused wells.
- Never flush medications down the toilet or sink. Learn more at Managing Unwanted Medication.
- Do not dump hazardous materials down storm drains, sink, or onto your land. MPCA: Hazardous Waste.
- Pick up after your pet.
- Seal trash bags and keep litter out of the street.
- Chemical deicers or anti-icers can be harmful to plants, pets and humans. Learn more at MPCA: Smart Salting Program.
- Repair motor fluid leaks. Take used motor fluids to a drop-off site.
- Be a water advocate: spread the word and get involved. There are many groups working to protect water across Minnesota.