

# Welcome *to the City of* Inver Grove Heights

## Water Treatment Process

### Raw Water Metering and Chemical Addition

Raw well water entering the facility is metered and injected with chlorine to oxidize iron in the water and convert it to a filterable solid. After per-chlorination, manganese sulfate is injected to effect removal of radium and alpha emitters. Potassium permanganate is then added at the raw water flow splitter box to assist iron oxidation and to oxidize manganese, converting it to a filterable solid form.

### Filtration

The chemically-treated water flows out of the splitter box to eight filter cells furnished with silica sand filter media. The filter media is coated with manganous oxides to remove any unoxidized iron or manganese. The media effectively filters all solids from the water.

### Disinfection

Following filtration, the water is disinfected by a second injection of chlorine as it flows to the plant's 1.0 million gallon clearwell. Inside the clearwell, the chlorinated water passes through a maze of chambers which promotes effective mixing and detention, ensuring complete disinfection.

### High Service Pumps

Treated water is pumped from the clearwell to the distribution system by six high service pumps. Two of the pumps convey water to the city's Asher pressure zone, while the other four pump to the nearby reservoir which acts as a large water tower for the city's South Grove pressure zone. The pressure in the Asher, South Grove, and Northside zones is controlled by the water elevation in the storage towers.







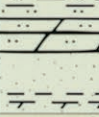



### Inver Grove Heights Water Treatment Process Significantly Improves the Overall Quality

Component	<i>Before Treatment</i>	<i>After Treatment</i>
Iron	0.3 ppm	Less than 0.1 ppm
Manganese	0.25 ppm	0.02 ppm
Chlorine	N/A	0.9-1.0 ppm <i>Leaving Plant FREE</i>
Fluoride	0.3 ppm	0.7-.8 ppm



# WHERE DOES OUR DRINKING WATER COME FROM?

*Ground water supplies 99 percent of total domestic, municipal, and industrial water used in Dakota County.*

GEOLOGIC FORMATION	GENERAL LITHOLOGY	PRESENCE & USE OF WATER
<b>Quaternary deposits</b> Surface deposits of sand and gravel; erodes easily		May contain water used for domestic, commercial, and irrigation purposes Easily contaminated
<b>Decorah Shale</b> Clay-like shale with thin fossil-bearing limestone		Helps to protect underlying aquifers from contamination
<b>Platteville and Glenwood Formations</b> Fossil-bearing limestone and sandy shale		Supplies very limited amounts of water to northern Dakota County
<b>St. Peter Sandstone</b> Poorly cemented, granular sandstone		Supplies limited amounts of water to Dakota County Easily contaminated in central and southern portions of the County
<b>Prairie du Chien Formation</b> Limestone		Supplies water for domestic use
<b>Jordan Sandstone</b> Poorly cemented, granular sandstone		Primary source for municipal, industrial and high capacity irrigation wells
<b>St. Lawrence-Funnel City Formation</b> Shaley sandstone or siltstone		Produces small amounts of water in eastern Dakota County
<b>Wonewoc Sandstone Formation</b> Silty to coarse-grained sandstone		Produces water to supplement flow in some high capacity industrial wells
<b>Eau Claire Formation</b> Siltstone, fine sandstone, and shale		Does not contain water
<b>Mt. Simon-Hinkley Formation</b> Fine to coarse-grained sandstone		The deepest high-yielding aquifer in Dakota County Protected for future use with a restriction on new well drilling

## DAKOTA COUNTY GROUND WATER AND GEOLOGY



### MAKING SAFE DRINKING WATER

Your drinking water comes from a groundwater source: seven wells ranging from 360 to 1044 feet deep, that draw water from the Jordan and Mt. Simon-Hinckley aquifers.

Inver Grove Heights 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 Daniel Helling, Utilities Superintendent, at 651-450-2565 or [dhelling@invergroveheights.org](mailto:dhelling@invergroveheights.org) if you have questions about Inver Grove Heights' 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.



# Invisible Water Leaks

## May Cause Your Money to Go Down the Drain

### WHAT TO LOOK FOR

Inver Grove Heights Utilities Division personnel have compiled a list of checks residents can make to determine if they may have a water leak in their home. Plumbing fixtures can leak water amounting to 10's of thousands of gallons in a three month billing period. By following the steps below to detect invisible leaks, you may be able to prevent the unwanted arrival of a large utility bill.

If you have a leak that results in an unusually high bill for the winter quarter, it will affect your sewer charges for the remainder of the year. The City will work to remedy these situations on a case by case basis once all leaks have been repaired.

The Utilities Division will provide leak detection assistance and consumption monitoring for any resident free of charge. If you feel you may have a leak and cannot find the source contact the Utility Division at 651-450-4309 to schedule an appointment.

### CHECK YOUR METER

Turn off all water sources in your home to perform this test. Locate your water meter. It will be inside your home where your water service enters from outside – usually near the furnace and hot water heater.



There you will also find your main water shut-off valve, which you will need if you ever want to stop the flow of water into your home. Once you've located your meter, look at the face. The meter has a small red diamond or star called the low flow indicator. If all water sources are turned off and the low flow indicator is still moving you probably have a leak.

### WHERE'S THE LEAK?

**Running Toilets** – A common problem, these leaks oftentimes can be heard. To be sure remove the tank lid – since water should only run for a short time after a flush, seeing running water without a flush means you have found your leak. Another problem with toilets is the loss of a seal on the tank flapper valve. To diagnose this problem, turn off water to the toilet. If in a few minutes the water has drained from the tank, you have a leak. Another way to check for this leak is to put a few drops of food coloring in the tank.

If colored water starts to seep into the bowl without a flush, the flapper valve is not sealing.

**Water Softeners** – Your water softener might be another source of an invisible leak. Since the softener usually discharges directly to a drain pipe, it's difficult to monitor how much water is being consumed. The softener can malfunction during the regeneration cycle, causing water to continuously run to the sewer system, most softeners have a by-pass valve that can stop this flow until repairs can be made. An increase in salt consumption also is an indicator that the softener may be malfunctioning.

**Dripping Faucets** – Although it might not seem like much, a drip every few seconds can add up to over 350 gallons in a quarterly billing period. A leaky faucet can usually be easily fixed by replacing a seal in the fixture.

**Other Water Sources** – Things like lawn sprinklers, pools, hot tubs, washing machines, and dishwashers may also be the source of water leaks. Usually leaks from these sources will be visible and result in pooling water somewhere in your home or yard. The same generally is true of a leaking pipe, you will see water running or pooling somewhere on your property.

### WATER USE BREAKDOWN

<u>Use</u>	<u>Gallons Per Capita Per Day</u>
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



## INVER GROVE HEIGHTS WATER UTILITY INFORMATION

Only a portion of the population is on city water. In 2018, city residents consumed nearly 1 billion gallons of water. Listed below is some of the infrastructure that makes up the water distribution system.

- 1,802 fire hydrants
- 3,926 valves
- 8,155 water meters
- 169.8 miles of water main lines from 6 to 30 inches in diameter
- 3 water towers and 2 reservoirs containing 10 million gallons

## Conservation is Important, Even in the Land of 10,000 Lakes

Despite our seeming abundance of water, conservation is still essential in Minnesota. For example, it is anticipated that in parts of the metropolitan area groundwater levels are dropping much faster than the water can be replenished. In addition, some agricultural regions in Minnesota are especially vulnerable to drought which can affect crop yields and municipal supplies. It's important we use our water wisely. Below are some tips to help you and your family conserve.

### Water Conservation Tips:

- ◆ Water early in the morning—between 4 a.m. and 10 a.m. is best. Avoid watering late in the evening to help prevent turf-grass diseases. Do not water during restricted periods.
- ◆ Rule of thumb for lawn watering — 1" to 1.5" of water per week, including rainfall. Keep intervals between watering as long as possible to encourage deeper root growth.
- ◆ Leave grass longer during hot weather (2.5" to 3.5"). This will promote deep root growth, shade the growth crowns, and help protect them during windy periods.
- ◆ Place rain barrels beneath your downspouts. The rain-water can be used for outdoor plants and trees or to wash your car.
- ◆ Repair dripping faucets and leaky toilets. Dripping faucets can waste up to 2,000 gallons of water each year. Leaking toilets can waste as much as 200 gallons per day.
- ◆ Position your sprinklers so water lands on the lawn or garden, not on paved areas. Also, avoid watering on windy days.
- ◆ When watering the lawn, do it long enough for the moisture to soak down to the roots where it will do the most good. A light sprinkling can evaporate quickly and tends to encourage shallow root systems. Put an empty tuna can on your lawn—when it's full, you've watered about the right amount.
- ◆ Replacing an 18 liter per flush toilet with an ultra-low volume (ULV) 6 liter flush model represents a 70% savings in water flushed and will cut indoor water use by about 30%.

The U.S. Environmental Protection Agency's website has great tips about how you can conserve, and save money in the process! Visit it here: <http://www.epa.gov/WaterSense/pubs/fixleak.html>

## Inver Grove Heights Irrigation Policy

### Odd/Even:

Residents who have an address that ends in an even number; 2, 4, 6 etc. are asked to only water their lawn on even numbered days.

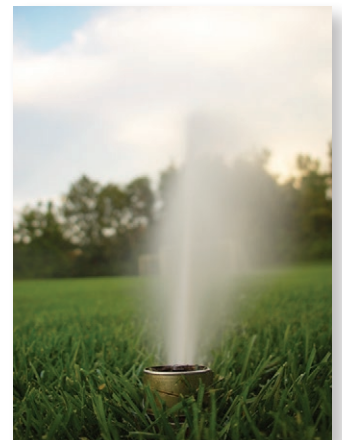
Residents whose address ends in an odd number; 1, 3, 5

etc. can water their lawn on odd numbered days. This will balance the demand on the City water system during hot, dry periods. The balanced water use will allow the Utility Division to maintain safe operating levels in water towers and reservoirs in case a fire or another emergency occurred during one of these periods.



### Time of Day:

Residents are asked to avoid lawn watering between the hours of 12:00 noon and 5:00 p.m. on all days. This will prevent the waste of water during the warmest hours of the day when up to 30% of sprinkling water is lost due to evaporation. It will also give the Utility Division a 5 hour period every day to help restore adequate levels in the City water towers and reservoirs.



## BACKFLOW DEVICES

The testing requirements for testable non-RPZ devices became effective for installations made on or after January 23, 2018.

### RESPONSIBILITIES

#### RESPONSIBILITY OF THE MUNICIPALITY

The municipality is responsible for notifying owners of backflow devices of the need for initial and annual testing of backflow devices. This can be done through the plumber when the plumbing permit is issued. It may be helpful for the municipality to prepare an information sheet to provide to the plumber at time of the plumbing permit application. As a condition of the permit, the plumber informs the device owner of the requirements.

#### RESPONSIBILITY OF THE OWNER

The owner of the backflow prevention device is responsible for making sure the backflow device is tested upon installation and at least annually thereafter. The owner is responsible for arranging for a backflow device tester to test devices at least annually.

#### RESPONSIBILITY OF THE PLUMBING CONTRACTOR

The plumbing contractor is responsible for informing the building owner of the need to have their backflow devices tested upon installation and at least annually thereafter.

#### RESPONSIBILITY OF THE BACKFLOW TESTER

- ◆ The backflow device tester is responsible for testing the backflow device and tagging it with the testing date, tester signature and backflow certification number.
- ◆ Written records of testing and maintenance must be maintained and submitted to the administrative authority and the community public water supplier within 30 days following the test.

# 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 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 (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 Inver Grove Heights 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) (<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. Inver Grove Heights 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: [Are your pipes made of lead? Here's a quick way to find out.](https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home) (<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) (<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) (<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) (<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) (<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) (<https://www.health.state.mn.us/communities/environment/lead/sources.html>).

## Some People Are 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.

## 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.



# Frequently Asked Questions

## What is the hardness of Inver Grove Heights water?

The level is 20-22 grains or 370 parts per million hardness.

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

The hardness level of 20-22 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.

## 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 owner's 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 owner's manual or maintenance company for assistance.

## Where should my sump pump drain hose discharge?

Outside. Sump pumps to collect ground water are not allowed to discharge into the sanitary sewer system. Hoses must be routed to drain to the outside of the home and not into a laundry tub or floor drain.



## How to Read the Water Quality Data Tables

The tables (shown on opposite page) 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.

## Water Quality Data Tables 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.

**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.

**N/A (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 (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

**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.



# Inver Grove Heights Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2018.

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>).

## Water Quality Data Tables

### 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 (06/03/16)	90% of homes less than 1.3 ppm	0 ppm	0.12 ppm	0 out of 30	No	Corrosion of household plumbing.
Lead (06/3/16)	90% of homes less than 15 ppm	0 ppb	3.9 ppb	0 out of 30	No	Corrosion of household plumbing.

### INORGANIC & 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
Barium (04/09/14)	2 ppb	2 ppb	0.24 ppb	N/A	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposit.
Gross Alpha	15.4 pCi/l	0 pCi/l	10 pCi/l	N/A	No	Erosion of natural deposits.
Combined Radium	5.4 pCi/l	0 pCi/l	4.8 pCi/l	N/A	No	Erosion of natural deposits.
Uranium (2014)	5.4 pCi/l	0 pCi/l	0.9 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 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	16.1 ppb	8.30 – 16.10 ppb	No	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA)	60 ppb	N/A	4.1 ppb	0.00 – 4.10 ppb	No	By-product of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.59 ppm	0.45 – 0.68 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 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	0.75 ppm	0.70 – 0.80 ppm	No	Erosion of natural deposits; water additive to promote strong teeth.



## 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 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](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 \(UCMR4\)](https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html) (<https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html>).

UNREGULATED CONTAMINANTS – Tested in drinking water.			
Contaminant	Comparison Value	Highest Average or Highest Single Test Result	Range of Detected Test Results
Group of 6 Haloacetic Acids (HAA6Br)	N/A	2.8 ppb	2.21 - 3.39 ppb
Group of 9 Haloacetic Acids (HAA9)	N/A	4.7 ppb	3.39 - 6.01 ppb
Sodium*	20 ppm	5.27 ppm	N/A
Sulfate	500 ppm	15.1 ppm	N/A

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

## The 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.

Water softeners are a water treatment device. They remove water hardness (dissolved calcium and magnesium). Water softeners must be installed and maintained properly to be safe and effective. Learn more at [Home Water Softening](https://www.health.state.mn.us/communities/environment/water/factsheet/softening.html) (<https://www.health.state.mn.us/communities/environment/water/factsheet/softening.html>).

### The benefits of soft water include:

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

### The drawbacks of soft water include:

- Operation and maintenance 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 as a byproduct. This can have negative effects at wastewater treatment plants and on ecosystems. Reduce the amount of salt brine used or install a salt-free system.



# Help Protect Our Most Precious Resource — WATER

## The Value of Water

Drinking water is a precious resource, yet we often take it for granted.

Throughout history, civilizations have risen and fallen based on access to a plentiful, safe water supply. That's still the case today. Water is key to healthy people and healthy communities.

Water is also vital to our economy. We need water for manufacturing, agriculture, energy production, and more. One-fifth of the U.S. economy would come to a stop without a reliable and clean source of water.

Systems are in place to provide you with safe drinking water. The state of Minnesota and local water systems work to protect drinking water sources. For example, we might work to seal an unused well to prevent contamination of the groundwater. We treat water to remove harmful contaminants. And we do extensive testing to ensure the safety of drinking water.

If we detect a problem, we take corrective action and notify the public. Water from a public water system like yours is tested more thoroughly and regulated more closely than water from any other source, including bottled water.

## 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.

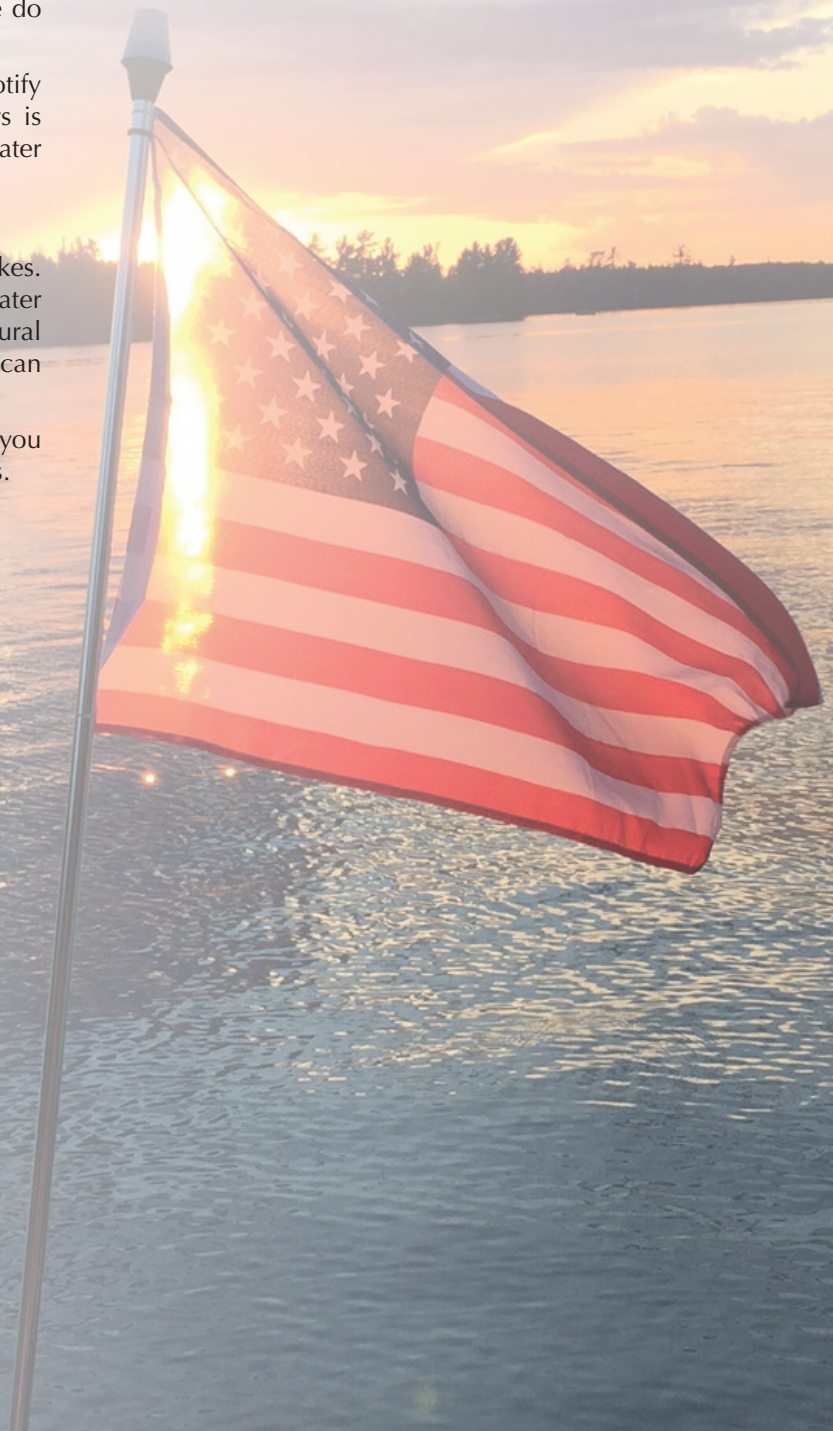
We must use our water wisely. Below are some tips to help you and your family conserve – and save money in the process.

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

[U.S. Environmental Protection Agency's WaterSense](https://www.epa.gov/watersense) web page (<https://www.epa.gov/watersense>)







UTILITIES DIVISION  
8168 Barbara Avenue  
Inver Grove Heights, MN 55077

## 2018 WATER QUALITY REPORT

PRSRT STD  
U.S. POSTAGE  
**PAID**  
TWIN CITIES, MN  
PERMIT NO. 4331

**ECRWSS**

**ECRWSS  
POSTAL CUSTOMER**

### 2018 Water Quality Report

**City of  
Inver Grove Heights  
651-450-4309**

The City of Inver Grove Heights is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2018. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

