



MADISON WATER UTILITY

Annual Water Quality Report

A SUMMARY OF WATER TESTING CONDUCTED IN 2025

This annual report complies with federal and state drinking water rules, which require us to provide water quality information to our customers each year. Unless otherwise noted, results are based on testing conducted in 2025.

We are pleased to report that we continue to supply high-quality water that meets or exceeds all federal and state standards for health and safety. Test results are summarized inside this brochure.

For water quality questions or to request a copy of this report, please call (608) 261-9299 or email water@madisonwater.org. Visit our website, madisonwater.org, to learn more about our programs and projects.

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Quality & Reliability Since 1882



YOUR WATER SOURCE

Madison's drinking water comes from a deep sandstone aquifer that sits hundreds of feet below the city. The water originates as rain or snow that slowly soaks into the ground and is filtered through layers of soil and rock. This natural filtration produces excellent water for us to enjoy.

WHICH WELL SERVES MY ADDRESS?

The Madison water system consists of 21 active wells and over 920 miles of interconnected pipes. Most locations receive water from one to three wells. Our website has an application that can tell you which wells supply water to your home or business. There are links to detailed reports with the latest water quality test results. For more information, call the Water Utility or go to madisonwater.org.

WHAT KEEPS OUR WATER SAFE?

The high-quality aquifer supplying our drinking water requires little treatment. Madison Water Utility disinfects the water with chlorine to reduce the risk of microbial contamination. A small amount of chlorine kills bacteria and viruses that can be in groundwater. Chlorine also travels with the water and is ready to kill microbes that it might encounter in the system. Our goal is to maintain a chlorine residual above 0.1 milligrams per liter (mg/L) at all points in the distribution system. Typical levels range from 0.2 to 0.4 mg/L.

HOW ELSE IS THE WATER TREATED?

Fluoride is added to Madison drinking water to improve dental health and reduce tooth decay. The US Centers for Disease Control and Prevention (CDC) and Wisconsin Department of Health Services recommend maintaining

an average fluoride level of 0.7 mg/L. Water from each well is tested daily to achieve this target. In 2025, the system-wide average of 6,602 tests was 0.63 mg/L.

To improve water clarity, four Madison wells have filters that remove more than 95% of the iron and manganese before it enters the piping system. These filters reduce the occurrence of rust-colored water at the customer tap.

A first of its kind for a Wisconsin drinking water utility, a PFAS removal system went online at Well #15 in September 2025. Visit page 6 for more information on how filter systems at our wells work!

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, 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. These people should seek advice about drinking water from their health care providers. EPA/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 (800-426-4791) or EPA's website epa.gov/safewater.

Cryptosporidium and *Giardia*, organisms commonly linked to water-borne illness, are found primarily in surface waters such as lakes and rivers. Because Madison's drinking water comes from a deep groundwater aquifer, these organisms do not pose a significant health risk in Madison tap water.

POTENTIAL CONTAMINANTS IN DRINKING WATER AND THEIR LIKELY SOURCES

Both tap water and bottled water come from rivers, lakes, streams, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. The water can also pick up and transport substances resulting from the presence of animals or from human activity. These substances are also called contaminants.

Contaminants are any physical, chemical, biological, or radiological substance or matter in water. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from leaky sewer pipes, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts, metals, minerals, and nutrients, which can occur naturally in the soil or groundwater or they may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
 - **Pesticide:** Generally, any substance or mixture of substances intended to prevent, destroy, repel, or mitigate any pest.
 - **Herbicide:** Any chemical(s) used to control undesirable vegetation.
- **Radioactive contaminants**, which can occur naturally in rock formations and groundwater or be the result of oil and gas production and mining.

To protect public health, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in tap water provided by public water systems. Similarly, the Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Routine testing helps to ensure that drinking water – tap and bottled – adhere to these regulatory limits.

MICROBIOLOGICAL TESTING

Bacteria – To ensure drinking water safety, routine bacteriological tests are conducted. Over 200 distribution samples are collected each month from representative locations. Samples are tested for coliform bacteria, indicators of potential contamination. In 2025, the Water Utility collected 3,130 routine distribution samples with none testing positive for coliform bacteria. The absence of coliform positive samples reflects good source water quality and adequate disinfection maintained in the distribution system.

HOW TO READ THE WATER QUALITY DATA TABLE

The EPA and Wisconsin Department of Natural Resources (WDNR) establish the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to the regulatory limits. Substances not detected are not included in the table.

- **Maximum Contaminant Level Goal (MCLG)**
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.
- **Maximum Contaminant Level (MCL)**
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.
- **Action Level (AL)**
The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a public water system shall follow.
- **Health Advisory (HA)**
The level of a chemical in drinking water that is not expected to cause any non-cancer health effects.

ADDITIONAL HEALTH INFORMATION

NOTE: Three samples showed unusual results for arsenic, barium, and other metals. While the levels were below the MCL they were much higher than historic results for Madison. Upon resampling, arsenic tested below detection (<1.1 ug/L) and barium was in its typical range – 7 to 72 ug/L. We suspect a lab error caused the initial unusual test results. Nevertheless, the high initial arsenic results require the following language:

While your drinking water meets US EPA's standard for arsenic, it does contain low levels of arsenic. US EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. US EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

THE EPA ON DRINKING WATER CONTAMINANTS

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 mean that water poses a health risk. More information about contaminants and potential health effects can be obtained from the Environmental Protection Agency:

- Safe Drinking Water Hotline, **800-426-4791**
- EPA website, [epa.gov/safewater](https://www.epa.gov/safewater)

WATER QUALITY TABLE

2025 DATA, UNLESS OTHERWISE NOTED

SUBSTANCE DETECTED (UNITS)	IDEAL GOAL (MCLG)	HIGHEST LEVEL ALLOWED (MCL)	MEDIAN LEVEL FOUND	RANGE OF RESULTS	VIOLATION (YES/NO)	WELLS WITH DETECTIONS	TYPICAL SOURCE OF SUBSTANCE
REGULATED SUBSTANCES							
Atrazine (ppb) - 2023 data	3	3	non-detect	nd - 0.03	NO	11, 13, 14, 16, 25, 29	Runoff from herbicide used on row crops
Arsenic (ppb)	zero	10	non-detect	nd - 6.7	NO	Wells 17, 20 & 26	Erosion of natural deposits; Glass and electronics production
Barium (ppb)	2,000	2,000	22	7.0 - 990	NO	All wells	Erosion of natural deposits; Discharge from metal refineries
Chromium, Total (ppb)	100	100	non-detect	nd - 2.3	NO	6, 9, 11, 12, 13, 14, 16	Erosion of natural deposits; Discharge from steel and pulp mills
1,2-Dichloroethylene, cis (ppb)	70	70	non-detect	nd - 0.5	NO	Wells 7 & 11	Discharge from industrial chemical factories; Biodegradation of PCE and TCE
Fluoride (ppm)	4	4	0.8	0.3 - 0.8	NO	All wells	Erosion of natural deposits; Added to promote strong teeth
Nickel (ppb)	n/a	100	2.4	0.5 - 3.9	NO	All wells	Erosion of natural deposits; Electroplating, stainless steel and alloy products
Nitrate (ppm)	10	10	1.0	nd - 4.0	NO	Fifteen wells	Fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	1	1	non-detect	nd - 0.01	NO	Well 9	Fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
PFOA (ppt)	zero	4	non-detect	nd - 2.0	NO	Well 14	Firefighting foam; Landfills, food packaging, clothing, fabrics, upholstery
PFOS (ppt)	zero	4	non-detect	nd - 1.9	NO	Well 16	Firefighting foam; Landfills, food packaging, clothing, fabrics, upholstery
Selenium (ppb)	50	50	non-detect	nd - 1.6	NO	6, 12, 14, 15, 25	Erosion of natural deposits; Petroleum and metal refineries
Tetrachloroethylene [PCE] (ppb)	zero	5	non-detect	nd - 2.7	NO	6, 7, 9, 11, 18	Discharge from factories, dry cleaners, and auto shops
Trichloroethylene [TCE] (ppb)	zero	5	non-detect	nd - 0.4	NO	Wells 7, 11 & 18	Discharge from metal degreasing sites, other factories
Xylene, Total (ppb)	10,000	10,000	non-detect	nd - 0.7	NO	Well 25	Discharge from petroleum and chemical factories
RADIONUCLIDES							
Gross Alpha (pCi/L) - 2023 data	zero	15	1.3	nd - 5.1	NO	7, 19, 24, 28	Erosion of natural deposits
Radium, 226+228 (pCi/L)	zero	5	3.2	2.6 - 4.6	NO	7, 24, 27, 28, 30	Erosion of natural deposits
DISINFECTION BY-PRODUCTS (DISTRIBUTION)							
Haloacetic Acids [HAA5] (ppb)	60	60	1.3	0.5 - 2.3	NO	n/a	By-product of drinking water chlorination
Total Trihalomethanes [TTHM] (ppb)	zero	80	3.7	1.1 - 8.2	NO	n/a	By-product of drinking water chlorination
UNREGULATED SUBSTANCES							
Chromium, Hexavalent (ppb)	n/a	n/a	1.6	0.9 - 1.9	NO	6, 13, 14, 16	Erosion of natural deposits; Chrome plating, leather tanning, wood preservation
1,4-Dioxane (ppb)	n/a	n/a	0.1	nd - 0.4	NO	Wells 11, 15 & 18	Discharge from chemical factories; Cosmetics and detergents
Metolachlor (ppb) - 2023 data	n/a	n/a	non-detect	nd - 0.01	NO	Well 14	Runoff from herbicide used on row crops
Strontium (ppb)	n/a	n/a	77	51 - 120	NO	All wells	Erosion of natural deposits
Trichlorofluoromethane (ppb)	n/a	n/a	non-detect	nd - 0.7	NO	Well 11	Discharge from industrial chemical factories; Degreaser, propellant, refrigerant
OTHER SUBSTANCES		AESTHETIC GOAL					
Chloride (ppm)	250		32	1.0 - 200	NO	All wells	Erosion of natural deposits; Road salt application
Iron (ppm)	0.3		non-detect	nd - 0.19	NO	17, 24, 27, 28, 30	Erosion of natural deposits
Manganese (ppb)	50		2.0	nd - 41	NO	Sixteen wells	Erosion of natural deposits
Silver (ppm)	0.1		non-detect	nd - 0.00	NO	Wells 15, 16 & 26	Discharge from industrial chemical factories
Sodium (ppm)	n/a		12	2.2 - 66	NO	All wells	Erosion of natural deposits; Road salt application
Sulfate (ppm)	250		17	5.3 - 37	NO	All wells	Erosion of natural deposits
Zinc (ppb)	5,000		3.5	nd - 18	NO	13, 14, 17, 26	Erosion of natural deposits

UNITS IN THE TABLE

- One milligram per liter (mg/L) equals one part per million (ppm)
- One microgram per liter (µg/L) equals one part per billion (ppb)
- One milligram per liter equals 1,000 micrograms per liter
- One part per billion is equal to 1,000 parts per trillion (ppt)
- One ppb is analogous to one second in 32 years
- Picocurie per liter (pCi/L) is a measure of radioactivity
- nd = not detected

Important Note About The Table: The table reports the maximum and minimum concentrations for each substance found in the water from at least one well. Several substances are found only in a few wells. Contaminant levels reported in the table may not be representative of the water quality at your home. Visit madisonwater.org or call 608-266-4654 to get more information about water quality for the well that serves your home or business.

PROTECT YOURSELF FROM LEAD EXPOSURE

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula- and breast-fed) and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Madison Water Utility has removed all known lead service lines. The utility is responsible for providing high-quality drinking water but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time.

You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. **Use the steps listed below to identify lead pipes.** Using a filter, certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead, is effective in reducing lead exposures. Follow instructions provided with the filter

to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. **Boiling water does not remove lead from water.**

Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

If you are concerned about lead in your water and wish to have your water tested, contact a local certified lab for lead testing information:

- WI State Laboratory of Hygiene, **608-224-6203**, slh.wisc.edu

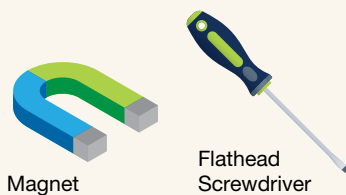
IDENTIFYING LEAD WATER PIPES IN YOUR HOME

MAIN STEPS:

1. How old is your home?

Lead water pipes were commonly installed in Madison homes until 1929. Lead solder was used to join pipes until 1986.

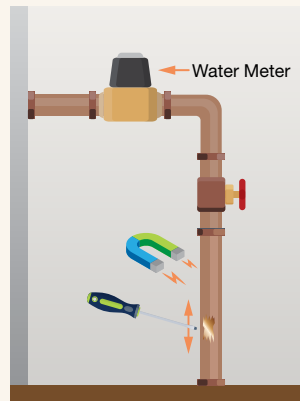
2. Gather your tools!



3. Search your home to gain access to exposed plumbing pipes.

4. Test your pipes.

Use the flathead screwdriver to scratch the outside of your exposed plumbing pipes. Then test to see if the pipes are magnetic.



5. Identify the pipe material.



Lead: shiny and silver when scratched, magnet **will not** stick to it



Copper: similar in color to a penny when scratched, magnet **will not** stick to it



Galvanized Steel: when scratched remains a dull gray color, magnet **will** stick to it



PEX/CPVC: plastic pipe/in appearance, magnet **will not** stick to it

Questions about how the pipe material can affect your drinking water? Contact your plumber or Madison Water Utility.

WATER SERVICE LINE INVENTORY

To comply with the federal Lead and Copper Rule Revisions & Improvements, Madison Water Utility has developed an inventory of all water service lines in our system. The Utility has collected pipe material data for service lines based on permit records, water main tap cards, meter records, and maintenance, repair, and replacement work.

As of December 31, 2025, there were no known lead lines connected to the Madison water system. However, much

of the service line pipe material data is based on historic records and, therefore, can present minor inaccuracies. As such, occasionally, previously unknown lead service lines may be newly discovered. The most up-to-date service line inventory can be accessed through the City of Madison Open Data Portal at: madisonwater.org/water-quality/lead-copper-in-water/lead-service-line-inventory

If you have a lead water service line, you may be eligible to receive a rebate covering half the cost of replacement up to \$3,000. Call our general administrative number at **(608) 266-4651** or email water@madisonwater.org for more information.

LEAD AND COPPER TESTING WITHIN THE WATER SYSTEM

Madison’s landmark Lead Service Replacement Program helped our community remove or replace nearly 8,000 lead pipes between 1995 and 2011. Water quality tests conducted in 2023 (see table) continue to show that lead and copper corrosion has been minimized and test results from customer taps were all below action levels.

	Ideal Goal (MCLG)	Action Level (AL)	90th Percentile	Range	Samples Above AL
Lead (ppb)	zero	15	1.8	<0.5 – 5.8	0 of 50
Copper (ppb)	1,300	1,300	150	77 – 210	0 of 50

Corrosion of pipes, plumbing fittings, and fixtures may cause metals, including lead and copper, to enter drinking water. Rather than adding phosphorus-based chemicals to control corrosion, Madison Water Utility is committed to promptly removing any newly discovered lead service line.

To assess corrosion of lead and copper, Madison Water Utility conducts tap sampling for lead and copper at selected sites [50] once every three years; the next round is scheduled for 2026. Complete lead tap sampling data (from 2011 through 2023) is available on our website, [madisonwater.org/water-quality/lead-copper-in-water](https://www.madisonwater.org/water-quality/lead-copper-in-water).

WHY ARE SODIUM AND CHLORIDE LEVELS RISING IN MADISON’S WATER?

Tests show increasing levels of sodium and chloride at several Madison municipal wells. These wells supply drinking water for customers across the city, and many are surprised to hear that this water quality challenge is now impacting multiple wells. Historic applications of salt for winter road safety and melting of ice and snow are the main contributors, with applications made years ago still impacting our groundwater resources.

The City of Madison has invested significantly to reduce the amount of road salt applied on City maintained streets however large amounts of salt are still applied on private property and within commercial spaces. We need your help

to safeguard the groundwater resources we are using today and those for the future!

Reducing the amount of salt you apply on sidewalks and driveways and instead using physical removal of ice and snow is a great start. Sand is a good alternative. If you own or operate a business, consider employing a company that is “Salt Wise Certified” or take the training yourself. Ensuring your water softener is set to the correct hardness level also limits the amount of salt sent out into our wider environment.

Questions? Contact us at (608) 266-4654 or email water@madisonwater.org for more information.

PFAS TESTING

Madison wells are tested twice annually for up to 30 PFAS (per- and polyfluoroalkyl substances). The table summarizes the 2025 results: at least one PFAS was found in the water from six wells. US EPA established MCLs for six PFAS: PFOA, PFOS, PFBS, PFHxS, PFNA, and HPFO-DA (Gen-X). All water from active Madison wells meets these new standards.

PFAS are a large group of human-made chemicals widely used in industry and consumer goods. They are responsible for the waterproof, non-stick, and/or stain-resistant properties of many consumer products. PFAS do not break down in the environment and, because of their widespread use, they are commonly found in air, soil, and water as well as the blood of people and animals all over the world. PFAS get into groundwater from places that make or use PFAS, and the release from consumer products in landfills.

Over the last five years, regular testing sometimes found PFAS at up to ten Madison wells. Except for PFBA and PFHxS at Wells 6, 9, 11, and 14, individual PFAS levels at a well are often 2 parts per trillion (ppt) or lower - a level below which not every lab can measure. Year-to-year differences in test results may be due to the reporting limit at a lab or the test method used. Each of the following PFAS was found

PFAS	Guideline (ppt)	Range of Results (ppt)	Wells with Detections
PFBA	RPHGS: 10,000	2.0 - 49	Wells 6, 9, 11 & 14
PFPeA	--	2.1 - 2.3	Well 14
PFHxA	RPHGS: 150,000	2.1 - 2.2	Well 14
PFOA	MCL: 4	nd - 2.0	Well 14
PFBS	HA: 2,000	2.1 - 2.5	Well 14
PFHxS	HA: 10	nd - 6.5	Well 6, 11, 13, 14 & 16
PFOS	MCL: 4	nd - 1.9	Well 16

RPHGS = Recommended Public Health Groundwater Standard
HA = Health Advisory | MCL = Maximum Contaminant Level

at least once at one Madison well: PFBA, PFBS, PFPeA, PFPeS, PFHxA, PFHxS, PFHpA, PFOA, PFOS, and 6:2 FTS.

Complete PFAS test results for 2021 through 2025 can be found on our website, www.madisonwater.org.

GET TO KNOW YOUR WATER SYSTEM & STAFF

CONNECT WITH MADISON WATER UTILITY

-  **Website:** madisonwater.org
-  **Facebook:** madisonwater
-  **Twitter/X:** MadWaterUtility
-  **Instagram:** madison_water
-  **Address:** 119 E Olin Avenue, Madison, WI 53713
-  **Phone:** (608) 266-4651
-  **Email:** water@madisonwater.org
-  **General Manager:** Krishna Kumar
-  **Water Utility Board President:** Patrick Delmore

LANGUAGE SERVICES

- You have the right to free language Services. Please call **608-266-4651** for more information.
- Usted tiene derecho a recibir servicio gratuito de intérprete. Por favor llame al teléfono **608-266-4651** para mayor información.
- Koj muaj tvoj cai tau kev pab txhais lus pub dawb. Thov hu rau **608-266-4651**.
- 您有權獲得免費的語言服務。請致電 **608-266-4651** 以了解更多信息。

GET INVOLVED

Water Utility Board Monthly Meetings are held at: 119 East Olin Avenue, starting at 4:30pm.

2026 Water Utility Board Meeting Dates:*

- | | |
|-------------|----------------|
| ▪ May 26 | ▪ September 29 |
| ▪ June 24 | ▪ October 27 |
| ▪ July 28 | ▪ November 23 |
| ▪ August 25 | |

**Meeting dates are subject to change.*

Please find the official Board Meeting calendar at: www.cityofmadison.com/city-hall/committees/water-utility-board

HOW DOES DRINKING WATER FILTRATION WORK IN MADISON?

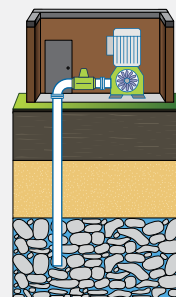
Madison Water Utility taps an underground aquifer and pumps treated groundwater to your faucet. A large treatment plant is not necessary because the underlying water quality is good. Instead, filter systems are added to some wells to remove specific contaminants.

Aquifer:
Porous rock material that stores water.

Two types of filter systems installed at Madison wells include those designed to remove minerals (iron and manganese) and a new system designed to remove Per and Polyfluoroalkyl Substances (PFAS). Both systems operate in a similar way. See the image below for details on how water moves through these systems.

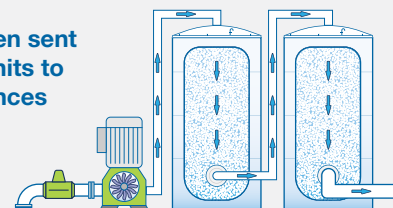
At wells where filters are not necessary, water is pumped from underground, chlorine and fluoride is added, and the water is then either pumped into a reservoir for storage until needed or pumped directly out into the water distribution system.

MAIN STEPS IN THE PROCESS:



1. Water is pumped up from the underground aquifer by the municipal well pump.

2. The water is then sent through filter units to remove substances like iron and manganese or PFAS.



3. Sampling and testing is conducted by utility staff to ensure filtration systems are operating as designed.



4. Filtered water is pumped into the water distribution system or into storage at reservoirs or water towers.