Menomonee Falls Water Utility
W156N8480 Pilgrim Road
Menomonee Falls, WI 53051
262-532-4800

CONSUMER CONFIDENCE REPORT 2023
SURFACE WATER

INTRODUCTION

The Village of Menomonee Falls Water Utility is pleased to present the annual Drinking Water Quality Report to you. This report informs the public about the source from which quality water is provided to our customers in 2023. In this report, we provide you with details of the Village's water source, any compounds or contaminants that have been detected in the water distribution system, and how the levels of these substances compare to the standards set by governmental regulatory agencies.

The Utility is dedicated to providing our customers with accurate information pertaining to the quality of the water supply. The Village of Menomonee Falls Water Utility and its employees are committed to protecting the public health and providing water that is safe to drink for our customers. We are pleased to report that the water quality test results met all federal and state requirements for the year 2023.

WATER SYSTEM INFORMATION

If you have any questions relating to this report, or any other concerns that you would like addressed, please call the Menomonee Falls Utilities office at (262) 532-4800, Monday through Friday between 8:00 a.m. and 4:30 p.m

Participate in discussions on water quality by attending the Village of Menomonee Falls Utilities & Public Works Committee meetings which are normally held on the first & third Monday of each month at 5:30 p.m. in Conference Room 3338 at Village Hall, W156N8480 Pilgrim Road. Please contact the Utility Department for a schedule at (262) 532-4800 or visit our website at www.menomonee-falls.org.

SOURCE OF YOUR MENOMONEE FALLS WATER

The Village of Menomonee Falls Utility purchases water from the City of Milwaukee. The source of the drinking water is Lake Michigan, a surface water source.

In addition to the Menomonee Falls Consumer Confidence Report (CCR), you will find the Milwaukee Water Works CCR included with this report.

ADDITIONAL INFORMATION

All drinking water may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of these contaminants does not necessarily indicate that the water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than others in the general population. Persons with compromised or weakened immune systems, such as those with cancer undergoing chemotherapy, organ transplant patients, people with HIV/AIDS, some elderly individuals, 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 reduce the risk of infection caused by cryptosporidium and other microbiological contaminants can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at **1-800-426-4791**.

EDUCATIONAL INFORMATION

The sources of drinking water; both tap water and bottled water include rivers, lakes, streams, ponds, reservoirs, 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, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (2) inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming; (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses; (4) 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 storm water runoff and septic systems; and (5) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health. Ninety-five percent of Wisconsin communities take their water from underground water supplies (groundwater) through wells.

WHAT'S IN YOUR WATER?

Your water may contain extremely small amounts of inorganic, mineral-type compounds such as copper, fluoride, lead, nitrate, and nitrite; volatile organic compounds such as trihalomethanes; compounds that emit radiation such as beta emitters; and particles which create turbidity (water cloudiness). The compliance levels of each of these substances detected in the year 2023 are shown on the following page.

MONITORING AND REPORTING VIOLATIONS

Monitoring and reporting violations result when a water system fails to collect and/or report results for State required drinking water sampling. Due to outside contracted laboratory error, the September 2023 DBP (disinfection biproduct sample) required recollection outside the required reporting period. Currently, all monitoring and reporting requirements are in compliance. "Sample location" refers to the distribution system, or an entry point or well number from which a sample is required to be taken. If a water system tests annually, or more frequently, the results from the most recent year are shown on the CCR.

More than 99 percent of Wisconsin's public water supplies meet those standards for regulated chemicals. The state also monitors for chemicals not regulated by the federal government and issues health advisories if needed.

LEAD AND COPPER

The Menomonee Falls Water Utility is required to test the drinking water in a number of homes for lead and copper. These minerals are able to enter the drinking water by way of corrosion of home plumbing systems. The Menomonee Falls Water Utility has been optimizing the control of corrosion by adding phosphate to drinking water treatments. The levels of lead and copper in the drinking water increase as corrosion levels increase and as the length of time the water remains in contact with the plumbing increase. If corrosive water remains motionless in the plumbing system for six hours or more, lead and copper levels may exceed the maximum level. The action levels set for lead and copper are shown on the reverse side.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Village of Menomonee Falls Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in private plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 3 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Additional information on lead in drinking water, testing

methods, and steps you can take to minimize exposure is available from the EPA at http://www.epa.gov/safewater/lead.

The Utility would like to take this opportunity to express its thanks again to the residents that participated in the collection of these samples.

Additional information is available from the US EPA's safe drinking water hotline at **1-800-426-4791**.

Sincerely,

Thomas Hoffman
(262) 532-4415
Interim Director of
Public Works & Utilities

Thomas Dimoff
(262) 532-4808
Deputy Director of Utilities

Menomonee Falls Water Utility
Village of Menomonee Falls
W156N8480 Pilgrim Road
Menomonee Falls, WI 53051-3140
(262) 532-4800

In 2023, one billion surface water gallons were purchased wholesale by the Menomonee Falls Water Utility from the City of Milwaukee. Listed below are the test results for Menomonee Falls Municipal purchased water during the year 2023.

Term	Definition
AL	Action level: The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements that a water system must follow. Action Levels are reported at the 90th percentile for homes at the greatest risk.
Haloacetic Acids	HAA5: Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid, tribromoacetic acid, bromochloroacetic acid, dibromochloroacetic acid, and bromodichloroacetic acid.
HA	Health Advisory: An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable federal standard, but serves as technical guidance to assist federal, state and local officials.
Ug/L or ppb	Microgram per liter or parts per billion.
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.
Median	The middle value of the entire data set for the parameter (range from high to low).
mg/L or ppm	Milligram per liter or parts per million
pCi/l	Picocuries per liter: A measure of radioactivity. A picocurie is 10
RAA	Running Annual Average: The average of four quarterly samples collected in one 12-month period.
TT	Treatment Technique: a required process intended to reduce the level of a contaminant in drinking water.
Trihalomethanes	TTHMs: Chloroform, bromodichloromethane, dibromochloromethane, and bromoform
Turbidity	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. For 2013, the highest value detected or maximum value was 0.22 NTU and < 0.3 NTU 100% of the time. For 2015, the highest value detected or maximum value was 0.28 NTU and < 0.3 NTU 100% of the time.

Disinfection Byproducts

Contaminant (Units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-22	60	60	3	2-4		No	By-product of drinking water chlorination
TTHM (ppb)	D-22	80	0	9.1	7.0-12.6		No	By-product of drinking water chlorination
HAA5 (ppb)	D-81	60	60	3	1-4		No	By-product of drinking water chlorination
TTHM (ppb)	D-81	80	0	9.0	6.8-13.1		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (Units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (If prior to 2023)	Violation	Typical Source of Contaminant
Copper (ppm)	AL=1.3	1.3	0.1200	0 of 30 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	AL=15	0	2.10	1 of 30 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits

Additional Health Information

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Menomonee Falls is providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been unused for 6 or more hours, flush the tap for 2-3 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

UCMR-4

Mandatory monitoring program

All contaminate levels are within the range of all state and federal laws. The presence of a substance in drinking water does not necessarily indicate the water poses a risk to your health. Certain quantities of some substances are essential to good health, but excessive quantities can be hazardous.

2019-2020 Analytical Results

Analytical Results: UCMR4 Safe Drinking Water Analysis

Analyte Name	Range	Average	Sample Date	Typical Source of Substance
Alpha-Hexachlorocyclohexane	N/D	N/D	12-3-19 to 9-8-20	Pesticide
Anatoxin - A	N/D	N/D	6-8-20 to 9-22-20	Source Water
Butanol	N/D	N/D	12-3-19 to 9-8-20	Solvent, Food Additive
Butylated Hydroxyanisole	N/D	N/D	12-3-19 to 9-8-20	Food Additive (Antioxidant)
Chlorypyrifos	N/D	N/D	12-3-19 to 9-8-20	Organophosphate, Insecticide, Acaricide, Miticide
Cylindrospermopsin	N/D	N/D	6-8-20 to 9-22-20	Source Water
Dimethipin	N/D	N/D	12-3-19 to 9-8-20	Herbicide and Plant Growth Regulator
Ethoprop	N/D	N/D	12-3-19 to 9-8-20	Insecticide
Germanium	N/D	N/D	12-3-19 to 9-8-20	Naturally Occurring Element
Manganese	0.52-0.84 ug/L	0.68 ug/L	12-3-19 to 6-10-20	Naturally Occurring Element
Methoxyethanol	N/D	N/D	12-3-19 to 9-8-20	Synthetic Cosmetics, Perfumes, Fragrances, Hair Preparations, Skin Lotions
Oxyfluorfen	N/D	N/D	12-3-19 to 9-8-20	Herbicide
Profenofos	N/D	N/D	12-3-19 to 9-8-20	Insecticide and Acaricide
Propen	N/D	N/D	12-3-19 to 9-8-20	Flavorings, Perfumes
Quinoline	N/D	N/D	12-3-19 to 9-8-20	Anti-Malarial Pharmaceutical, Flavoring Agent
Tebucomazole	N/D	N/D	12-3-19 to 9-8-20	Fungicide
Toluidine	N/D	N/D	12-3-19 to 9-8-20	Dyes, Rubber, Pharmaceuticals, Pesticide
Total Microcystin	N/D	N/D	6-8-20 to 9-22-20	Source Water
Total Permethrin	N/D	N/D	12-3-19 to 9-8-20	Insecticide
Tribufos	N/D	N/D	12-3-19 to 9-8-20	Insecticide, Cotton Defoliant

NOTES APPLICABLE TO THIS ANALYSIS:

N/D = Not Detected

2019-2020 Analytical Results

Analytical Results: UCMR4 Safe Drinking Water Analysis

Analyte Name	Range	Average	Sample Date	Typical Source of Substance
Bromochloroacetic acid (BCAA)	0.32-1.7 ug/L	1.01 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
Bromodichloroacetic acid (BDCAA)	0.58-.090 ug/L	10.74 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
Chlorodibromoacetic acid (CDBAA)	0.34-0.65 ug/L	0.49ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
Dibromoacetic acid (DBAA)	0.45-0.67 ug/L	0.56 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
Dichloroacetic acid (DCAA)	0.90-2.5 ug/L	1.7 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
Monobromoacetic acid (MBAA)	N/D	N/D	12-3-19 to 9-8-20	By-product of drinking water disinfection
Monochloroacetic Acid (MCAA)	N/D	N/D	12-3-19 to 9-8-20	By-product of drinking water disinfection
Tribromoacetic acid (TBAA)	N/D	N/D	12-3-19 to 9-8-20	By-product of drinking water disinfection
Trichloroacetic acid (TCAA)	0.63-1.2 ug/L	0.91 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
HAA5	.896-5.561 ug/L	3.16 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
HAA6Br	.315-4.46 ug/L	2.69 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection
HAA9	1.21 – 8.84 ug/L	5.35 ug/L	12-3-19 to 9-8-20	By-product of drinking water disinfection

N/D = Not Detected

Information on Monitoring for Cryptosporidium and Radon

Our water system did not monitor our water for cryptosporidium or radon during 2023. We are not required by State or Federal drinking water regulations to monitor.

2023 Annual Water Quality Report

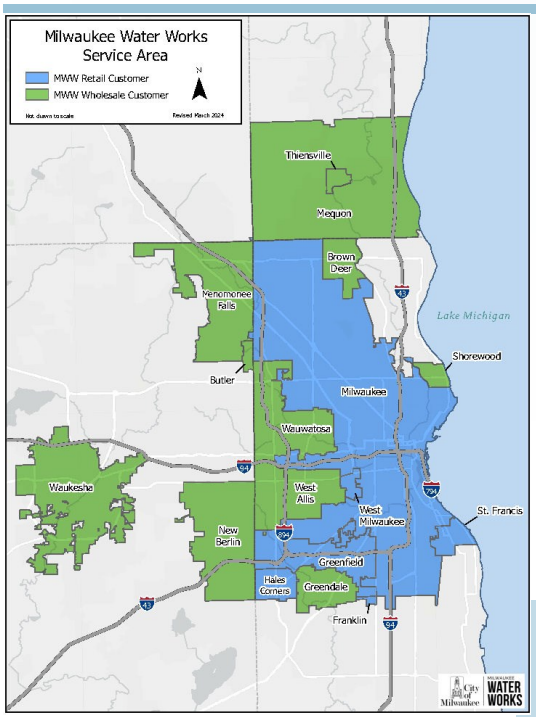
2023 Informe Anual de Calidad del Agua

City of Milwaukee
MILWAUKEE WATER WORKS

The U.S. Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (DNR) require drinking water utilities to provide an Annual Water Quality Report (otherwise known as a Consumer Confidence Report) to help consumers understand where their drinking water comes from, so they can make informed decisions about their health and protection of the environment. In this report, you will find:

- Information about the source of your drinking water
- The treatment process that ensures the highest quality water
- Results of 2023 water quality testing and compliance with water quality regulations and standards
- 2023 Lead and Copper Rule results
- Additional educational information and public health announcements

Visit Milwaukee.gov/water for more information.



Milwaukee Water Works (MWW)

The City of Milwaukee-owned public utility provides safe drinking water to approximately 947,000 people in Milwaukee and across 17 communities:

Wholesale Customers: Brown Deer, Butler, Greendale, Menomonee Falls, Mequon, New Berlin, Shorewood, Thiensville, Waukesha, Wauwatosa, and West Allis.

Retail Customers: Greenfield, Hales Corners, a portion of Franklin, Milwaukee, St. Francis, and West Milwaukee.

Table of Contents

Important Information

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Información Importante

Este informe contiene información muy importante sobre su agua de beber.Tradúzcalo o hable con alguien que lo entienda bien.

Lug tseem ceeb rua cov siv dlej kws has lug Moob

Ntawm nuav yog cov lug tseem ceeb qha txug kev haus dlej nyob nroog Milwaukee. Yog mej nyeem tsi tau cov lug nuav, thov lwm tug txhais rua mej.

Participate in decisions regarding your water
Attend City of Milwaukee Common Council Public Works Committee meetings, which occur regularly each month in Milwaukee City Hall, Room 301B, 200 East Wells Street, Milwaukee, WI 53202. Public comment is welcome on any item. You may also attend City of Milwaukee Common Council meetings, which meet in the Milwaukee City Hall, Third Floor, Common Council Chambers, 200 East Wells Street, Milwaukee, WI 53202. Common Council meeting dates vary. Please contact the City Clerk for the schedule at (414) 286-2221, or visit Milwaukee.gov/cityclerk/ PublicRecords/Agendas.htm.

This material is available in alternative formats for individuals with disabilities upon request. Please contact the City of Milwaukee ADA Coordinator via phone at (414) 286-3475 or email ADACoordinator@milwaukee.gov. Please provide a 72-hour advance notice for large print and seven days for Braille documents.

Braille

Large Print

Source Water and Types of Contaminants

"Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants."

Milwaukee's drinking water comes from Lake Michigan, a surface water source. The most recent DNR Source Water Assessment for Milwaukee is available online under "Resources" at Milwaukee.gov/water/WaterQuality. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants, or substances, that may be present in source water include:

Microbial contaminants, such as viruses, protozoa, and bacteria, may come from leaky sewer pipes, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

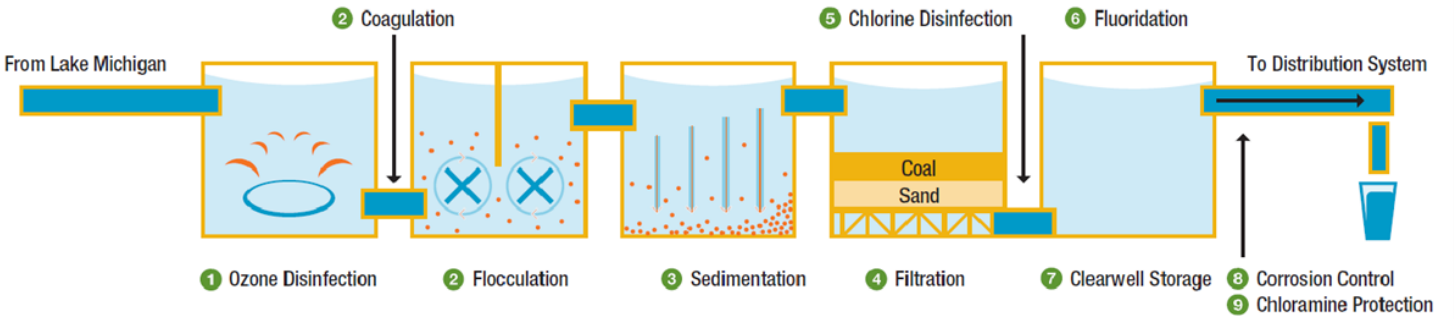
Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's safe drinking water hotline (800-426-4791) or at: www.epa.gov

In order to ensure that tap water is safe, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. MWW maintains a nationally recognized water monitoring program to assure all treated water meets or exceeds local, state, and federal regulations.

Milwaukee Water Works Drinking Water Treatment Process



(1) Ozone disinfection: Ozone gas is bubbled through the incoming lake water. Ozone destroys disease- causing microorganisms including *Giardia* and *Cryptosporidium*, controls taste and odor, and reduces the formation of chlorinated disinfection byproducts.

(2) Coagulation and Flocculation: Aluminum sulfate is added to the water to neutralize the charge on microscopic particles. The water is then gently mixed to encourage suspended particles to stick together to form "floc."

(3) Sedimentation: Sedimentation is the process in which floc settles out and is removed from the water.

(4) Biologically Active Filtration: The water is slowly filtered through 24" of anthracite coal and 12" of crushed sand to remove very small particles.

(5) Chlorine Disinfection: After filtration, chlorine is added as a secondary disinfectant to provide extra protection from potentially harmful microorganisms.

(6) Fluoridation: Fluoride, when administered at low levels, is proven to help prevent tooth decay.

(7) Clearwell Storage: Treated water is stored in deep underground tanks and pumped as needed through the distribution system.

(8) Corrosion Control: A food-grade phosphorus compound is added to help control corrosion of pipes. This helps prevent lead and copper from leaching from plumbing into water.

(9) Chloramine Protection: Ammonia changes the chlorine to chloramine, a disinfectant that maintains bacteriological protection in the distribution system.

Reading the Water Quality Tables

The following tables show regulated and unregulated contaminants and substances detected in Milwaukee's drinking water in 2023. It also includes all substances tested for in the mandatory EPA monitoring program, most recently the Fifth Unregulated Contaminant Monitoring Rule (UCMR-5). The contaminant test results demonstrate the water meets or exceeds drinking water standards for health and safety. The tables contain the name of each substance, the highest level allowed by regulation (Maximum Contaminant Level), the ideal level for public health (Maximum Contaminant Level Goal), the amount detected, and the usual sources of such contamination. The presence of a substance in drinking water does not necessarily indicate the water poses a health risk. Certain quantities of some substances are essential for good health, but excessive quantities can be hazardous.

Definitions	
Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow. Action levels are reported at the 90th percentile for homes at greatest risk.
Health Advisory (HA)	An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a health advisory is not a legally enforceable federal standard, but serves as technical guidance to assist federal, state, and local officials.
Maximum contaminant level (MCL)	The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
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 residual disinfectant level (MRDL)	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
Maximum residual disinfectant level goal (MRDLG)	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 contamination.
Treatment technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.
Turbidity	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms may include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Unit abbreviations	
<	"less than" or not detected
-log[H_+]	pH measurements are expressed as the negative base 10 logarithm of the hydrogen ion concentration
N/A	not applicable
NR	not regulated
NTU	nephelometric turbidity unit (a unit to measure turbidity)
ppb	parts per billion (microgram per liter)
ppm	parts per million (milligram per liter)
ppq	parts per quadrillion (picograms per liter)
ppt	parts per trillion (nanogram per liter)
pCi/L	picocuries per liter: a measure of radioactivity
RAA	running annual average: the average of four quarterly samples collected in one year

Primary Drinking Water Standards

The EPA has National Primary Drinking Water Regulations that set water quality standards for contaminants and other substances in public drinking water. These are referred to as Maximum Contaminant Levels (MCLs), which are established to protect public health. MCLs are legally enforceable above the allowed level. Below is a list of MCLGs (ideal goals), MCLs, and results detected in Milwaukee water. Results are from the water leaving the treatment plant, unless otherwise indicated.

Primary Contaminant or Substance	Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Average Detected	Range or Highest Detected	Date (if before 2023)	Meets Standard	Typical Source of Substance
Antimony (ppb)	6	6	0.17	0.16 - 0.18		Yes	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Atrazine (ppb)	3	3	0.02	0.02 - 0.02		Yes	Runoff from herbicide used on row crops
Barium (ppm)	2	2	0.019	0.019	5/20/2020	Yes	Drilling waste discharge; metal refineries
Bromate (ppb)	0	10 (RAA)	2	0 - 7.2		Yes	Byproduct of drinking water disinfection
Chlorine, Total (ppm)	4	4 (MRDL)	1.55	1.46 - 1.64		Yes	Disinfection of drinking water
Chromium, Total (ppb)	100	100	0.8	0.69 - 0.90		Yes	Natural deposits and manufacturing
Fluoride (ppm)*	4	4	0.53	0.08 - 0.69		Yes	Erosion of natural deposits; water additive for dental health; aluminum factories
Heterotrophic Plate Count (HPC)	N/A	TT	Met Standard	Met Standard		Yes	Naturally present in the environment
Nickel (ppb) not detected in 2023	100	100	0.6	0.50 - 0.60	5/20/2020	Yes	Natural deposits and manufacturing
Nitrate (ppm)	10	10	0.39	0.32 - 0.39	8/9/2021	Yes	Runoff from fertilizer; leeching from septic tanks sewage; erosion of natural deposits
Total Coliform Bacteria	N/A	5% (TT)	N/A	Max: 0.0002%		Yes	Naturally present in the environment
Total Haloacetic Acids 5 (ppb)*	N/A	60	2.1	0 - 4.5		Yes	Byproduct of drinking water disinfection
Trihalomethanes, Total (ppb)*	N/A	80	8.8	5.6 - 14.0		Yes	Byproduct of drinking water disinfection

*Measured at customer taps

Turbidity Monitoring

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than 0.3NTU in 95% of samples. Turbidity is a measure of the cloudiness of water. We monitor for it because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single entry point turbidity measurement was 0.09 NTU. All of MWW samples in 2023 met the turbidity limits.

Did you know?

Milwaukee Water Works is part of the Partnership for Safe Water - Distribution System Optimization program. This is a voluntary program that pushes utilities to continuously improve the way they manage their system to balance the benefits of disinfection with carefully limiting disinfection by-products. The utility was awarded the Directors Award for the efforts and continues the reporting and goal setting in order to provide our community with the best water possible.

PFAS (Per- and Polyfluoroalkyl Substances)

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large group of human-made chemicals that have been used in industry and consumer products worldwide since the 1950s. Examples of their use include fire fighting foam, non-stick coatings and personal care products.

Starting at the end of 2022, large water utilities in Wisconsin are now required to sample for two PFAS compounds (PFOA and PFOS) in order to comply with a new WI DNR standard of 70 ppt. MWW has been testing drinking water for several PFAS compounds since 2008. Below are the concentrations of all PFAS compounds detected above the reporting limits in 2023 along with their interim Health Advisory Levels (HAL). PFOA and PFOS results below are from required sampling events only, but voluntary results were similar. All PFAS results can be found at www.milwaukee.gov/water/waterquality/PFAS.

PFAS Compound	Highest Level Allowed (MCL)	Interim HAL (ppt)	Average Detected	Range or Highest Detected
Perfluorobutanoic acid (PFBA) (ppt)	N/A	N/A	2.75	1.8 - 3.7
Perfluorooctanesulfonic acid (PFOS) (ppt)	N/A	0.02*	2.15	2.10 - 2.20
Perfluorooctanoic acid (PFOA) (ppt)	N/A	0.004*	2.15	2.10 - 2.20
PFOS + PFOA (ppt)	70	N/A	4.30	4.20 - 4.40

"Secondary Maximum Contaminant Levels (SMCL) are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color."

Secondary Drinking Water Standards

The following table lists contaminants which were detected in your water and that have a Secondary Maximum Contaminant Level (SMCL). There are no violations for detections of contaminants that exceed these guidelines. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color.

In addition to the regulatory sampling listed below from previous years, these contaminants were also tested in 2023 on a voluntary basis.

**The aluminum result in one sample from 2023 was 0.30 ppm, which is above the secondary maximum contaminant level.

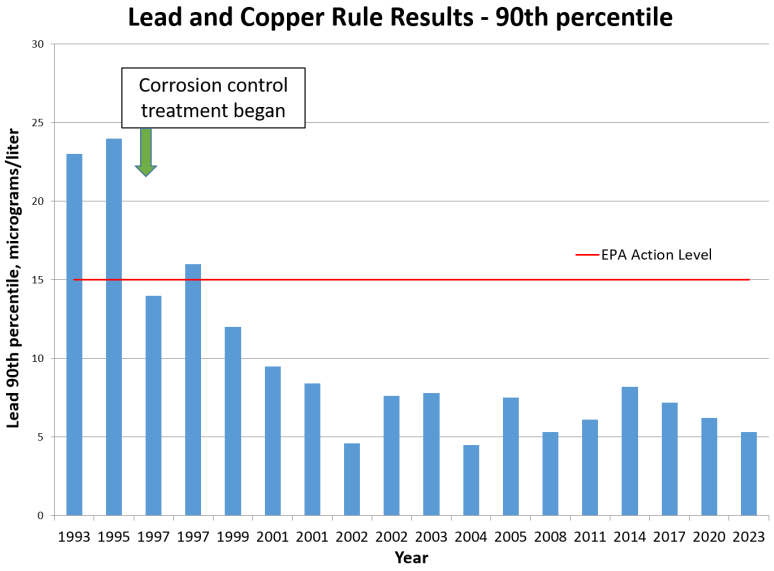
Contaminant or Substance	SMCL	Average	Range or Highest	Date (if before 2023)	Typical Source of Substance
Aluminum (ppm)**	0.05—0.20	0.05	0.05	8/24/2020	Water treatment additive; natural
Chloride (ppm)	250	15	15	8/24/2020	Natural deposits and road salts
Sodium (ppm)	250	9.8	9.8	8/9/2021	N/A
Sulfate (ppm)	250	28.0	26 - 28	8/24/2020	Natural deposits

Lead and Copper

In 2023, in compliance with the US EPA and Wisconsin DNR, MWW completed Lead and Copper Rule (LCR) testing. All samples were collected at the customers' taps from properties with lead service lines. In order to remain in compliance with EPA regulations, 90th percentile levels must be below 15 ppb for lead and 1300 ppb for copper. The 90th percentile is the level at which 90% of all results are at or below that concentration. There were two homes that tested above 15 ppb lead. Those residents were contacted immediately for follow up.

Lead and Copper (2023)	Action Level	90th percentile	Highest Detected	Sites Exceeding Action Level
Copper (ppb)	1300	61.1	108	0
Lead (ppb)	15	5.3	20.3	2

In 1996, MWW began adding a food grade ortho-phosphate to its finished water to reduce lead and copper leaching from pipes into the water. This is called corrosion control treatment (CCT). By the end of 1997, the treatment had been fully implemented and the lead concentrations dropped below the EPA action level during the next cycle of LCR compliance sampling (graph below). After a three-year study to optimize the CCT program, the DNR determined in 2022 that Milwaukee's water quality characteristics are ideal for reducing lead in water.



If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Lead and Copper Public Safety

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Learn more about lead in water:

www.milwaukee.gov/LeadPipes

Tips to Lower your Lead Exposure

- If your water has been unused for 6 or more hours, flush the tap for 3 minutes before using water for drinking or cooking.
- Use only cold water for drinking and cooking.
- Remove and clean faucet screens (aerators) regularly.
- Filter drinking water using a filter certified to NSF/ANSI 53 standards. Filtered water is recommended for children under 6 and those who are pregnant or breast feeding.
- If there is construction on your block, flush your taps at the end of each work day.

Radionuclides

MWW is on a reduced monitoring schedule for radioactive contaminants due to results being below half of the maximum contaminant level (MCL). Next scheduled monitoring for the utility will be 2026.

Radionuclide Contaminant	Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Level Detected	Range or Highest Detected	Sample Date (if prior to 2022)	Typical Source of Contaminant
Gross Beta Particle Activity (pCi/L)	0	50	1.6	-1.7-1.6	3/24/2020	Decay of natural and man-made deposits.
Gross Alpha, Excl. R & U (pCi/L)	0	15	0.7	0.5 - 0.7	3/24/2020	Erosion of natural deposits
Radium, (226 + 228) (pCi/L)	0	5	0.9	0.7 - 0.9	3/24/2020	Erosion of natural deposits
Gross Alpha, Incl. R & U (pCi/L)	0	15	0.9	0.7 - 0.9	3/24/2020	Erosion of natural deposits
Combined Uranium (ug/L)	0	30	0.3	0.3	3/24/2020	Erosion of natural deposits

Other Substances

As the largest water utility in Wisconsin, MWW goes above and beyond the required testing and provides the additional results to customers.

Contaminant or Substance	Average	Range or Highest Detected	Typical Source
1,1,1-Trichloro-2-propanone (ppb)	0.32	0 - 1.30	Byproduct of drinking water disinfection
1,1-Dichloro-2-propanone (ppb)	0.06	0 - 0.59	Byproduct of drinking water disinfection
Acetaldehyde (ppb)	2	0 - 15	Byproduct of drinking water disinfection
Ammonia (ppm)	0.28	0.20 - 0.36	Disinfection with chloramines; wastes; fertilizers and natural processes
Bromide (ppb)	14	13 - 15	Naturally occurring
Bromochloroacetonitrile (ppb)	0.34	0 - 0.61	Byproduct of drinking water disinfection
Butanal (ppb)	0.7	0 - 5.3	Byproduct of drinking water disinfection
Chlorate - 300.1 (ppb)	390	290 - 490	Byproduct of drinking water disinfection
Chloropicrin (ppb)	0.02	0 - 0.56	Byproduct of drinking water disinfection
Chromium, Hexavalent (ppb)	0.16	0.12 - 0.18	Manufacturing and weathering of natural deposits
Dibromoacetonitrile (ppb)	0.35	0 - 0.85	Byproduct of drinking water disinfection
Dichloroacetonitrile (ppb)	0.29	0 - 0.57	Byproduct of drinking water disinfection
Glyoxal (ppb)	0.8	0 - 6.1	Byproduct of drinking water disinfection
Perchlorate (ppb)	0.16	0.15 - 0.17	Naturally occurring and found as an impurity in hypochlorite solutions used for drinking water treatment
o-Phosphate as PO_4 (ppm)*	2	1.20 - 2.92	Corrosion control treatment added to coat pipes and prevent lead leaching
Propanal (ppb)	0.7	0 - 5.8	Byproduct of drinking water disinfection
Rubidium (ppb)	1.1	1.1	Naturally occurring
Total Organic Carbon (ppm)	1.44	1.34 - 1.56	Naturally occurring
Total Solids (ppm)	191	187 - 195	Measure of solid materials in water

*Measured at customer taps

Fifth Unregulated Contaminants Monitoring Rule (UCMR-5) (2023)

The Unregulated Contaminant Monitoring Rule (UCMR) was established by the EPA as part of the Safe Drinking Water Act Amendments of 1996. Every five years, in compliance with the EPA, MWW collects data on potential contaminants that are not yet regulated but are known, or anticipated, to occur in public water systems. These data help the EPA determine if future regulations are needed for contaminants of concern.

The current cycle of UCMR-5 includes 29 different types of PFAS compounds, plus lithium. The EPA established required reporting limits for each contaminant that all labs were required to use to ensure the data would be reliable and comparable regardless of which lab analyzed the samples. MWW sent all samples to an external, accredited lab, and all results were below the EPA reporting limits. This means that if the contaminant was present in the water, it was too low of a concentration to reliably measure by EPA's standards.

Contaminant	Result	Typical Source
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.005	Water proofing, fire fighting foam
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.002	Water proofing, fire fighting foam
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	<0.003	Water proofing, fire fighting foam
hexafluoropropylene oxide dimer acid (HFPO DA)	<0.005	Water proofing, fire fighting foam
nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.02	Water proofing, fire fighting foam
perfluorobutanoic acid (PFBA)	<0.005	Water proofing, fire fighting foam
perfluorobutanesulfonic acid (PFBS)	<0.003	Water proofing, fire fighting foam
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	<0.005	Water proofing, fire fighting foam
perfluorodecanoic acid (PFDA)	<0.003	Water proofing, fire fighting foam
perfluorododecanoic acid (PFDoA)	<0.003	Water proofing, fire fighting foam
perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	<0.003	Water proofing, fire fighting foam
perfluoroheptanesulfonic acid (PFHpS)	<0.003	Water proofing, fire fighting foam
perfluoroheptanoic acid (PFHpA)	<0.003	Water proofing, fire fighting foam
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	<0.003	Water proofing, fire fighting foam
perfluorohexanesulfonic acid (PFHxS)	<0.003	Water proofing, fire fighting foam
perfluorohexanoic acid (PFHxA)	<0.003	Water proofing, fire fighting foam
perfluoro-3-methoxypropanoic acid (PFMPA)	<0.004	Water proofing, fire fighting foam
perfluoro-4-methoxybutanoic acid (PFMBA)	<0.003	Water proofing, fire fighting foam
perfluorononanoic acid (PFNA)	<0.004	Water proofing, fire fighting foam
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	<0.005	Water proofing, fire fighting foam
perfluorooctanesulfonic acid (PFOS)	<0.004	Water proofing, fire fighting foam
perfluorooctanoic acid (PFOA)	<0.004	Water proofing, fire fighting foam
perfluoropentanoic acid (PFPeA)	<0.003	Water proofing, fire fighting foam
perfluoropentanesulfonic acid (PFPeS)	<0.004	Water proofing, fire fighting foam
perfluoroundecanoic acid (PFUnA)	<0.002	Water proofing, fire fighting foam
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0048	Water proofing, fire fighting foam
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0057	Water proofing, fire fighting foam
perfluorotetradecanoic acid (PFTA)	<0.0076	Water proofing, fire fighting foam
perfluorotridecanoic acid (PFTrDA)	<0.0067	Water proofing, fire fighting foam
Lithium	<9.0	Naturally occurring

Milwaukee Water Works maintains an extensive, nationally recognized water quality monitoring program. The utility tests for more than 500 substances to ensure safe water, increase understanding of how substances affect public health, and meet current and future regulations. This report contains substances that were detected in treated water in 2023. A full list of undetected substances and voluntary sampling can be found under "Resources" at Milwaukee.gov/water/WaterQuality.

Cryptosporidium

Cryptosporidium is a microscopic protozoan that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. MWW and Milwaukee Health Department have continued to test Lake Michigan source water and treated water for *Cryptosporidium* since 1993.

Cryptosporidium is found in many surface water sources (lakes, rivers, streams) and comes from human and animal wastes in the watershed. The risk of *Cryptosporidium* infection from drinking water has been reduced to extremely low levels by an effective treatment combination (*see* page 2), which places MWW in the Bin 1 classification (lowest risk) for *Cryptosporidium* treatment requirements set by the DNR.

No *Cryptosporidium*, Giardia, Reovirus, or Enterovirus were detected in any of the source water or finished drinking water samples collected in 2023.

MWW provides a brochure based on EPA and CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium.* Obtain a copy from our Customer Service Center, (414) 286-2830, or at Milwaukee.gov/water/WaterQuality and scroll down to Resource Links, choose "Information for persons with weakened immune systems."

Notice to Parents of Infants Six Months of Age or Younger

According to the CDC, the proper amount of fluoride, from infancy and at all ages throughout life, helps prevent and control tooth decay (cavities). Therefore, MWW, following public health recommendations, maintains a level of fluoride in our drinking water that is both safe and effective. The following is an advisory regarding fluoride and young infants:

The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of a child's life, followed by continued breastfeeding as complementary foods are introduced, for optimal short– and long-term health advantages. For more information, visit: pediatrics.aappublications.org/content/129/3/e827.

As of August 31, 2012, Milwaukee water is fluoridated at a level not to exceed 0.7 mg/L. According to the CDC, for infants up to six months of age, if tap water is fluoridated or has substantial natural fluoride (0.7 mg/L or higher) and is being used to dilute infant formula, a parent may consider using a low-fluoride alternative water source. Bottled water known to be low in fluoride is labeled as purified, deionized, demineralized, distilled, or prepared by reverse osmosis. Ready-to-feed (no-mix) infant formula typically has little fluoride and may be preferable at least some of the time. If breastfeeding is not possible, parents should consult a pediatrician about an appropriate infant formula option. Parents should be aware that there may be an increased chance of mild dental fluorosis if the child is exclusively consuming infant formula reconstituted with fluoridated water. Dental fluorosis is a term that covers a range of visible changes to the enamel surface of the tooth. For more information on dental fluorosis and the use of fluoridated drinking water in infant formula, go to CDC.gov/fluoridation

Information for Those with Compromised Immune Systems and/or Vulnerable Populations

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 systems 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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

For non-emergency contact: watwebcs@milwaukee.gov

Para una explicación en Español, por favor llame al: (414) 286-2830

City of Milwaukee
MILWAUKEE WATER WORKS

Milwaukee Water Works

Customer Service Center
Zeidler Municipal Building
841 N. Broadway, Room 406
Milwaukee, WI 53202
Open M-F, 7:30 a.m. to 5:00 p.m.

Phone: (414) 286-2830
TDD: (414) 286-8801

24-hour Water Control Center:
(414) 286-3710

Milwaukee.gov/water