

► 2019 Annual Consumer Report: Quality of Tap Water

South Milwaukee Water Utility's Drinking Water Meets or Surpasses All Federal and State Drinking Water Standards

► LETTER FROM THE SUPERINTENDENT

This is the annual report on the quality of water delivered by the South Milwaukee Water Utility. It meets the federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of our water, its constituents, and the health risks associated with any contaminants. Safe water is vital to our community. Please read this report carefully and, if you have questions, call the numbers listed below:

Providing this annual water quality report to our customers is an important part of our ongoing water quality efforts. If you have any questions about the Utility or this report, please call the Utility office at (414) 768-8070 or visit our website at smwi.org. Regular monthly meetings of the Water/Wastewater Commission also provide opportunities for public participation and additional information. These meetings are scheduled on the second Monday of the month at 6 p.m. – odd months at the Water Utility (100 Marshall Ave), and even months at the Wastewater Treatment Plant (3003 5th Ave).

Douglas Fischer, Superintendent-South Milwaukee Water Utility



Water Source

The South Milwaukee Water Utility is supplied by surface water from Lake Michigan.

Treatment Process

The South Milwaukee Water Utility uses an ultra-filtration pressurized membrane system. The membrane technology provides a verifiable barrier against viruses, turbidity, suspended solids and pathogen contamination such as Cryptosporidium of the City's drinking water supply.

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 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:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants such as salts and metals that can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants that 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, that must provide the same protection for public health.



► 2019 Annual Consumer Report: Quality of Tap Water

Health Information

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 (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than is 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. 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 are available from the Safe Drinking Water Hotline: (800) 426-4791.

Definition of Terms

- **AL:** Action Level
- **MCL:** Maximum Contaminant Level
- **MCLG:** Maximum Contaminant Level Goal
- **MFL:** Million fibers per liter
- **MRDL:** Maximum residual disinfectant level
- **MRDLG:** Maximum residual disinfectant level goal
- **NTU:** Nephelometric Turbidity Units
- **pCi/l:** picocuries per liter (a measure of radioactivity)
- **ppm:** parts per million, or milligrams per liter (mg/l)
- **ppb:** parts per billion, or micrograms per liter (ug/l)
- **ppt:** parts per trillion, or nanograms per liter
- **ppq:** parts per quadrillion, or picograms per liter
- **TCR:** Total Coliform Rule
- **TT:** Treatment Technique (a required process intended to reduce the level of contaminant in drinking water).

Required Additional Health Information

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled 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 (800-426-4791).

Concerning Lead in Our Water

The Water Utility is required to periodically test the drinking water in homes at 30 predetermined sites in the distribution system for lead and copper, that enters the drinking water by corrosion of home plumbing. For the last test year (2017), and since the introduction of polyphosphates in 1994, the water supply complies with the lead and copper action levels.

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. South Milwaukee Waterworks is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about the lead in your water, you may wish to have your water tested.

Additional information on lead in drinking water, testing materials, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at epa.gov/safewater/lead.

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 0.1NTU/0.3NTU. 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 0.050NTU.

National Primary Drinking Water Regulation Compliance

We'll be happy to answer any questions about the South Milwaukee Water Utility and our water quality. Call (414) 768-8070 for more information. You can also learn more about the South Milwaukee Water Utility water system by visiting smwi.org.

► 2019 Annual Consumer Report: Quality of Tap Water

CONTAMINANT (units)	SITE	MCL	MCLG	LEVEL FOUND	RANGE	SAMPLE DATE (if prior to 2019)	VIOLATION	Typical Source of Contaminant
HAA5 (ppb)	304	60	60	23	15-34		No	By-product of drinking water chlorination
TTHM (ppb)	304	80	0	48.2	24.2 - 52.6		No	By-product of drinking water chlorination
HAA5 (ppb)	307	60	60	26	16-38		No	By-product of drinking water chlorination
TTHM (ppb)	307	80	0	55.2	24.5 - 55.1		No	By-product of drinking water chlorination
HAA5 (ppb)	402	60	60	27	19-43		No	By-product of drinking water chlorination
TTHM (ppb)	402	80	0	42.3	27.3-48		No	By-product of drinking water chlorination
HAA5 (ppb)	407	60	60	27	19-38		No	By-product of drinking water chlorination
TTHM (ppb)	407	80	0	43.8	27.2-54.5		No	By-product of drinking water chlorination
INORGANIC CONTAMINANT								
ANTIMONY TOTAL		6	6	0.2	0.2		No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC		10	N/A	1	1		No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.022	0.022		No	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits
COPPER (ppm)		AL = 1.3	1.3	0.13	0 of 30 + action level	8/15/2017	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
CYANIDE (ppb)		200	200	5	5	4/19/2017	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
FLUORIDE (ppm)		4	4	0.7	0.7		No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
LEAD (ppb)		AL= 15	0	9.1	1 of 30 + action level	8/30/2017	*	Corrosion of household plumbing systems; erosion of natural deposits
NICKEL (ppb)		100		1.7	1.7		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products
NITRATE (NO ₃ -N) (ppm)		10	10	0.38	0.38		No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
MERCURY		2	2	0.1	0.1		No	Erosion of natural deposits, discharge from refineries and factories; runoff from landfills; runoff from cropland
SODIUM	n/a	n/a	14	14			No	N/A
RADIOACTIVE CONTAMINANTS								
COMBINED URANIUM (ppb)		5	0	1.4	1.4	4/7/2014	No	Erosion of natural deposits
UNREGULATED CONTAMINANT								
(units)		MCL	MCLG	LEVEL FOUND	RANGE	SAMPLE DATE		
SULFATE (ppm)		N/A	N/A	24	24			
Hexavalent Chromium (ppb)		N/A	N/A	0.23	0.20-0.23	1/6/2014		
Chromium (ppb)		N/A	N/A	0.31	0.30 -0.31	1/6/2014		
Molybdenum (ppb)		N/A	N/A	1.1	1.0 - 1.1	1/6/2014		
Strontium (ppb)		N/A	N/A	133	133-140	1/6/2014		
Vanadium (ppb)		N/A	N/A	0.27	0.27	1/6/2014		
Chloromethane (ppb) (Methylchloride) (ppb)		N/A	N/A	0.26	0.00 -0.26	1/6/2014		
Bromochloroacetic acid (ppb)		N/A	N/A	4.0	3.4 - 4.5			
Bromodichloroacetic acid (ppb)		N/A	N/A	5.9	5.3 - 6.4			
Clorodibromoacetic acid (ppb)		N/A	N/A	1.42	1.3 - 1.5			
Monobromoacetic acid (ppb)		N/A	N/A	0.59	0.48 - 0.65			
Dibromoacetic acid (ppb)		N/A	N/A	0.81	0.66 - 0.88			
Dichloroacetic acid (ppb)		N/A	N/A	8.45	7.2 - 9.6			
Trichloroacetic acid (ppb)		N/A	N/A	7.43	6.6 - 8.3			



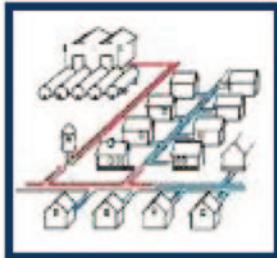


WE'RE ALL CONNECTED...
Maintaining the integrity of your
public drinking water system.

Residential Water User

Cross-Connection Hazards

Bathrooms & Kitchens



What is a Cross-Connection?

A cross-connection is an actual or potential connection between the safe drinking water (potable) supply and a source of contamination or pollution. State plumbing codes require approved backflow prevention methods to be installed at every point of potable water connection and use. Cross-Connections must be properly protected or eliminated.

How does contamination occur?

When you turn on your faucet, you expect the water to be as safe as when it left the treatment plant. However, certain hydraulic conditions left unprotected within your plumbing system may allow hazardous substances to contaminate your own drinking water or even the public water supply. Water normally flows in one direction. However, under certain conditions, water can actually flow backwards; this is known as Backflow. There are two situations that can cause water to flow backward: back siphonage and backpressure.

Back Siphonage

May occur due to a loss of pressure in the municipal water system during a fire fighting emergency, a water main break or system repair. This creates a siphon in your plumbing system which can draw water out of a sink or bucket and back into your water or the public water system.

Backpressure

May be created when a source of pressure (such as a boiler) creates a pressure greater than the pressure supplied from the public water system. This may cause contaminated water to be pushed into your plumbing system through an unprotected cross-connection.

Did you know...

Your water can become contaminated if connections to your plumbing system are not properly protected! The purpose of the local Cross-Connection Control Program, as required by State Plumbing Code and Regulations, is to ensure that everyone in the community has safe, clean drinking water.

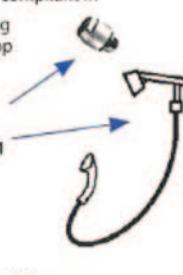
Public Health & Safety...

To avoid contamination, backflow preventers are required by state plumbing codes wherever there is an actual or potential hazard for a cross-connection. The Wisconsin Department of Natural Resources requires all public water suppliers to maintain an on-going Cross-Connection Control Program involving public education, onsite inspections and possible corrective actions by building owners if required.

In the Bathroom - Hand Held Shower Fixture

The hand held shower fixture is compliant if:

- When shower head is hanging freely, it is at least 1" above top of the flood level rim of the receptor (tub)
- Complies with ASSE#1014
- Has the ASME code 112.18.1 stamped on the handle



1" Minimum AIR GAP Above Tub From Fixture Outlet

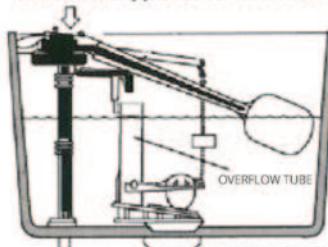
Bath Tub

In the Bathroom - Toilet Tanks

There are many unapproved toilet tank fill valve products sold at common retailers which do not meet the state plumbing code requirements for backflow prevention.

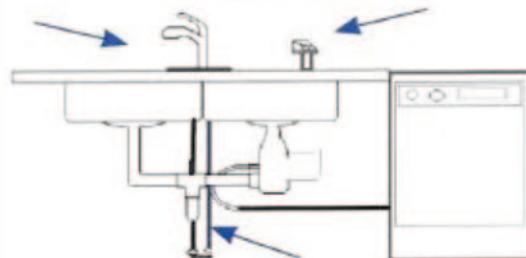
- Look for the ASSE #1002 Standard symbol on the device and packaging
- Replace any unapproved devices with an ASSE #1002 approved anti siphon ball-cock assembly. Average cost is typically \$12 to \$22 at home improvement stores
- Verify overflow tube is one inch below critical level (CL) marking on the device

ASSE #1002 Approved Ball Cock Assembly



Toilet water tank

In the Kitchen



Hoses and water treatment devices may create a potential backflow hazard if not properly isolated with backflow prevention methods.

Protect Your Drinking Water

Do...

- Keep the ends of hoses clear of all possible contaminants.
- Make sure dishwashers are installed with a proper "air gap" device.
- Verify and install a simple hose bibb vacuum breaker on all threaded faucets around your home.
- Make sure water treatment devices such as water softeners have the proper "air gap", which is a minimum of one inch above any drain.

Hose bibb Vacuum Breaker



Don't...

- Submerge hoses in buckets, pools, tubs, sinks or ponds.
- Use spray attachments without a backflow prevention device.
- Connect waste pipes from water softeners or other treatment systems directly to the sewer or submerged drain pipe. Always be sure there is a one inch "air gap" separation.

Air Gap





FOR MORE INFORMATION

- South Milwaukee Water Utility: smwi.org/water-utility/
- Wis. Department of Natural Resources: dnr.wi.gov
- Environmental Protection Agency (EPA): epa.gov