



Waukesha Water Utility

2018 Consumer Confidence Report for the Year 2017

The Waukesha Water Utility is pleased to present this annual report regarding its water supply. The Utility is committed to providing high quality water to its customers in amounts that meet their needs and protect their health at a fair price. Please read this report carefully, and contact the Utility with questions at (262) 521-5272, or visit our website at www.waukesha-water.com.

We are pleased to report that Waukesha water meets United States Environmental Protection Agency (USEPA) standards, except Radium and Gross Alpha. The Waukesha Water Utility has installed treatment at three of its facilities to remove and reduce the radionuclide levels. We currently supply water in compliance with the conditions contained in our order and stipulation from the State of Wisconsin. In June of 2016, the Great Lakes Compact unanimously approved Waukesha's application to borrow water from Lake Michigan, and then treat it and return it all to the lake via the Root River. The project will take several years to plan and build, but Waukesha's goal is to have the new water supply on-line by 2023. For more information on the new water supply, please visit our website at www.waukesha-water.com/overview.html. To learn more about how you can help sustain our precious natural resource, please visit our website at www.waukesha-water.com/conservation.

Where does Waukesha water come from?

Waukesha water is drawn from seven active sandstone wells, ranging from 1,600 – 2,266 feet deep and three active sand and gravel wells ranging from 105 - 149 feet deep.

The sandstone aquifer consists of layers of sandstone, limestone, and shale. It is covered by a thick shale layer that prevents local precipitation from recharging the aquifer in eastern Waukesha County. The recharge to the aquifer occurs in the western part of Waukesha County, near Jefferson County, where the shale layer is absent. As a result of pumping by many communities and private industries in Waukesha and Milwaukee Counties for over 50 years, the water levels have been dropping. In addition, radium occurs naturally in the sandstone aquifer at levels that exceed the EPA standard. The water quality and quantity issues are making the sandstone aquifer more expensive and complicated to use as a municipal water supply.

The sand and gravel aquifers in the southern and western edges of the City produce water with naturally low radium levels that do not require radium treatment. This saves money and avoids generating waste products from the treatment process that must be disposed in landfills or released to the environment. Water levels in the sand and gravel wells are much higher, which saves substantial energy and pumping costs. The Utility has been careful to site the sand and gravel wells in portions of the aquifer which are protected from direct surface influence by clay layers. The clay layers protect the wells from contamination and protect the local streams and wetlands from direct impacts from pumping groundwater. The water is captured immediately before it would have naturally discharged to the Fox River. After use, the water is treated and returned to the Fox River upstream from the well field. This returns the water to the local environment at essentially the same point it would have naturally flowed to, which offsets the impacts of pumping and returns the environment as close to a natural state as possible.

Health & Educational Information

All 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 the water poses a health risk. The Waukesha Water Utility continually monitors and tests its water quality and works with the Department of Natural Resources (DNR) and the United States Environmental Protection Agency (USEPA) to ensure that tap water in the community is safe to drink. More information about contaminants and the potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791, or at www.epa.gov.

Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer and 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. The USEPA and the Center for Disease Control and Prevention (CDC) Guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline, as referenced above.

WAUKESHA WATER UTILITY

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

CCR REPORT DATA

Year 2017

Substance Detected	EPA Standards		Amounts Detected		Sample Date	Typical Source of Detected Substance
	MCL	MCLG	Minimum	Maximum		
Disinfection Byproducts						
HAA5 (ppb)	60	60	0	3	2017	By-product of drinking water chlorination.
TTHM (ppb)	80	0	0	19.8	2017	By-product of drinking water chlorination.
Inorganic Contaminants						
ARSENIC (ppb)	10	n/a	0	3	2017	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
BARIUM (ppm)	2	2	0.03	0.14	2017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
CYANIDE (ppb)	200	200	0	40	2015	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
FLUORIDE (ppm)	4	4	0.4	0.7	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
NICKEL (ppb)	100	n/a	0.64	2	2017	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (NO3-N) (ppm)	10	10	0	0.10	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
SODIUM (ppm)	n/a	n/a	4.1	45	2017	Erosion of natural deposits.
COPPER (ppm)	AL = 1.3	1.3	0 of 32 results were above the action level.		2017	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
LEAD (ppb)	AL = 15	0	0 of 32 results were above the action level.		2017	Corrosion of household plumbing systems; Erosion of natural deposits.
Radioactive Contaminants						
COMBINED URANIUM (ug/l)	30	0	0	0.5	2017	Erosion of natural deposits.
GROSS ALPHA, EXCL. R&U (pCi/l)	15	0	0	27.1	2017	Erosion of natural deposits.
GROSS ALPHA, INCL. R&U (n/a)	n/a	n/a	0	27.9	2017	Erosion of natural deposits.
GROSS BETA PARTICLE ACTIVITY (pCi/l)	n/a	n/a	2.7	18.5	2017	Decay of natural and man-made deposits. MCL units are in millirem/year. Calculation for compliance with MCL is not possible unless level found is greater than 50 nCi/l.
RADIUM (226 + 228) (pCi/l)	5	0	1.0	12	2017	Erosion of natural deposits.
Unregulated Contaminants						
SULFATE (ppm)	n/a	n/a	17	150	2017	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring.
MOLYBDENUM by EPA Method 200.8 (ug/l)	n/a	n/a	1	1.3	2017	
CHLORATE by EPA Method 300.1 (ug/l)	n/a	n/a	26	222	2017	
STRONTIUM by EPA method 200.8 (ug/l)	n/a	n/a	2,538	38,977	2017	

The results are from 2017 (or prior, if indicated above) water testing, indicated quantities may vary. The state allows monitoring for some contaminants to be less than once per year because the concentration of these contaminants does not change frequently. If you would like more details on water chemistry, contact the Waukesha Water Utility.

Health Effects for any Contaminants with MCL Violations/Action Level Exceedances

GROSS ALPHA, EXCL. R&U	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
RADIUM (226+228)	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

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. Waukesha Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components associated with service lines and home plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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.

Key to Table

- Action Level (AL) = The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum Contaminant Level (MCL) = The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's allow for a margin of safety.
- Millirems/year (mrem/year) = A measure of radiation absorbed by the body.
- Picocuries Per Liter (pCi/L) = A measurement of radioactivity in water.
- Parts Per Million (ppm) = Milligrams per liter (mg/L). One part per million corresponds to one minute in two years or a penny in \$10,000.
- Parts Per Billion (ppb) = Micrograms per liter (ug/L). One part per billion relates to one minute in 2,000 years or a penny in \$10,000,000.
- Non-Detects (nd) = Laboratory analysis indicates that the constituents are not present.
- n/a = Not applicable.
- TCR = Total Coliform Rule.
- TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

The Waukesha Water Utility Commission meets at 6 p.m. on the third Thursday of each month at the Water Utility. Customers are welcome to participate in these meetings. For further information, you may contact the Waukesha Water Utility Office at (262) 521-5272.

Attention: If you are a landlord or a business owner, please forward this information on to your tenants and employees. The Waukesha Water Utility encourages you to conserve water, not only to protect a precious resource, but also to help their customers save money. Please visit our website at www.waukesha-water.com for ideas on how you can conserve.