

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By





We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Where Does My Water Come From?

Kaukauna Utilities water comes from five groundwater wells that are located throughout the city. The depths of the wells range from 500 to 850 feet. Our daily pumping averages around 1.2 million gallons a day, which calculates to 438 million gallons of treated water a year. We have the capability of pumping in excess of 4 million gallons a day. The distribution system consists of approximately 100 miles of water main, ranging from 6 to 16 inches in diameter. We have three iron filters, which serve the dual purpose of removing iron and radium from the water. We have two water towers, one on the north side and one on the south side of the city, each with a capacity of 500,000 gallons. We also have three underground reservoirs with a combined capacity of 600,000 gallons of water.

Additional Monitoring

We participated in the fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. 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 two 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

Source Water Assessment

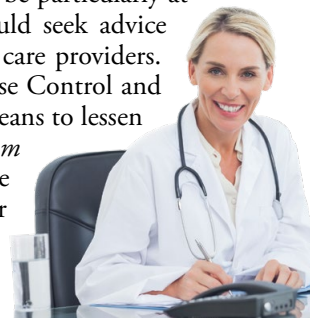
The Department of Natural Resources conducted assessments for all drinking water sources across the state. The purpose of the assessments was to determine the susceptibility of each drinking water source to potential contaminant sources and establish a relative susceptibility rating of high, moderate, or low for each source. The Kaukauna Utilities system is susceptible to contamination by volatile organic compounds, nitrate, beryllium, and microbes. The system has moderate susceptibility to contamination by synthetic organic compounds. The system has low susceptibility to ethylene dibromide. For additional information on the source water assessment, call Jeff Helmuth at (608) 266-5234.

Community Participation

You are invited to attend our Utility Commission meetings and voice your concerns about your drinking water. We meet the third Wednesday of each month beginning at 4:00 p.m. at Kaukauna Utilities Commission Chambers, 777 Island Street, Kaukauna.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Andy Vanden Heuvel, Water Department Superintendent, at (920) 858-9180. Additional information can also be found on our website at <https://www.kaukaunautilities.com/about-ku/water-department/>.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Handwashing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (i.e., pink or black slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly and flush with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals, resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen, as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and showerheads may be caused by water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration/Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out its website at <https://goo.gl/Jxb6xG>.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	KU RANGE OF DETECTIONS	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2021	15	0	9.3	ND–9.3	No	Erosion of natural deposits
Barium (ppm)	2020	2	2	0.008	0.002–0.008	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Combined Radium (pCi/L)	2021	5	0	3.1	0.8–3.1	No	Erosion of natural deposits
Fluoride (ppm)	2020	4	4	1.8	1.8–1.8	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	2	2–2	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	2	2–2	No	By-product of drinking water disinfection
Nickel (ppb)	2020	100	NA	2.8000	2.4000–2.8000	No	Occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
Nitrate (ppm)	2021	10	10	0.05	ND–0.05	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2020	50	50	1	0–1	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	6.2	6.2–6.2	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2021	80	NA	7.8	7.8–7.8	No	By-product of drinking water disinfection
Uranium (ppb)	2021	30	0	0.4	0.3–0.4	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.1030	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2020	15	0	10	2/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

UNREGULATED SUBSTANCES				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	AMOUNT DETECTED	KU RANGE OF DETECTIONS
1,2,4-Trimethylbenzene (ppb)	2017	NA	0.75	NA
Chloride (ppm)	2017	250	12.00	7.00 - 12.00
Iron (ppm)	2017	0.3	0.04	0.00 - 0.04
Sodium (ppm)	2020	NA	16.00	11.00 - 16.00
Sulfate (ppm)	2020	250	550.00	440.00 - 550.00
Zinc (ppm)	2017	5	0.02	0.00 - 0.02

OTHER UNREGULATED SUBSTANCES			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	KU RANGE OF DETECTIONS
Bromochloroacetic Acid (ppb)	2018	1.2	NA
Bromodichloroacetic Acid (ppb)	2018	1.5	NA
Chlorodibromoacetic Acid (ppb)	2018	0.71	NA
Dibromoacetic Acid (ppb)	2021	0.69	0.5–0.69
Dichloroacetic Acid (ppb)	2021	1.3	0.97–1.3
Monobromoacetic Acid (ppb)	2021	0.25	0.17–0.25
Trichloroacetic Acid (ppb)	2019	0.39	0.29–0.39

How Is My Water Treated and Purified?

The treatment process consists of a series of steps. First, raw water is pumped from our wells and sent to the filter plant, where we add potassium permanganate and manganese sulfate to the water before the filter tank. The addition of these substances oxidizes the iron, causing small particles (called floc) to adhere to one another, which makes the particles big enough to be filtered out as the water passes through the layers of anthracite and manganese greensand in the filter tank. This process removes iron and also reduces radium levels. After that process we add chlorine to the water for disinfection. Finally, the water is pumped to the distribution system.

