



Middleton Water Utility

2021 Water Quality Report

We are pleased to present this year's City of Middleton Water Quality Report. This report is designed to inform you about the quality of water we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Source of Water

Middleton draws its water from six sandstone wells, ranging in depth from 330 feet to 856 feet. These wells penetrate the Franconia, Galesville, Eau Claire and Mount Simon formations. The City has provided the Wisconsin Department of Natural Resources with inventory data on these wells that was used to prepare a source water assessment plan.

This report shows our water quality and what it means

If you have any questions with this report, please contact the **Middleton Water Utility at 608-821-8370**, Monday-Friday 7:30-4:00. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at the City of Middleton, 7426 Hubbard Avenue at 6:30 pm on the 2nd and 4th Mondays of each month. Copies of this report are available in English or Spanish at City Hall, or on the City's Web Site at cityofmiddleton.us. **Copias de Este informe están disponibles en Español en las oficinas de la ciudad, o en el sitio Web cityofmiddleton.us.**

The Middleton Water Utility routinely monitors for constituents in our drinking water according to Federal and State laws. The table shows the most recent results of our monitoring.

Wellhead Protection

The City of Middleton has adopted a Wellhead Protection Plan and Ordinance. The purpose of these land use controls is to help protect the source of our drinking water. Copies of the plan are available for inspection at City Hall.

Cross Connection Control Program

A cross connection is a direct or potential connection between any part of the public water supply system and a source of contamination or pollution. The most common form of cross connection is a garden hose, which is easily connected to the public water supply system and can be used to apply a variety of potentially dangerous substances, including chemicals and fertilizer. Other common cross connections include dishwashers, toilets, pressure washers, boilers, pools, and lawn sprinkler systems.

In order to reduce overall costs for compliance with DNR Regulation NR810.15, the City of Middleton Water Utility has implemented a comprehensive cross connection survey program. There is no cost for the survey and each on-site survey takes less than 45 minutes on average for a business and less than 30 minutes for a home survey when conducted at the time of new water meter installation.

The City will send postal notices to perform surveys of residential, commercial, and industrial buildings throughout the community. This is to detect actual & potential cross connections and make recommendations for the installation of backflow prevention devices or assemblies where necessary. This will help ensure that contaminated or polluted water cannot backflow into clean drinking water.

Definition of Terms	
Term	Definition
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.
nd	No detect
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)
TCR	Total Coliform Rule

Detected Contaminants: In accordance with DNR and USEPA requirements, your water is routinely tested for about 130 contaminants, including PFOS and PFAS. A listing of contaminants for which we test is available on the [Water & Sewer Utilities](#) web page. Testing to date has shown no detection of PFOS or PFAS contaminants. PFOS and PFAS testing will be included with our 2022 sampling schedule. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants that were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. **To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a million chance of having the described health effect.**

Test Results

Inorganic Contaminants							
Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
ARSENIC (ppb)	10	n/a	1	0 - 1	3/31/2020	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)	2	2	0.077	.004-.077	3/31/2020	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)	100	100	2	0 - 2	3/31/2020	NO	Discharge from steel and pulp mills; Erosion of natural deposits
COPPER (ppm)	AL=1.3	1.3	90 th Percentile: 0.21	0 of 30 results was above the action level	10/2/2020	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
FLUORIDE (ppm)	4	4	1.0	0.1 – 1.0	3/10/2020	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and factories.
LEAD (ppb)	AL=15	0	90 th Percentile: 3.50	0 of 30 results was above the action level.	10/14/2020	NO	Corrosion of household plumbing systems; Erosion of natural deposits

NICKEL (ppb)	100		1.6000	0.5200-1.6000	4/1/2020	NO	Nickel occurs naturally in soils, groundwater and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (N03-N) (ppm)	10	10	4.70	0.00-4.70		NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SELENIUM(ppm)	50	50	1	0-1	3/31/2020	NO	Discharge from petroleum and metal refineries; Erosion of natural deposits: Discharge from mines
SODIUM (ppm)	n/a	n/a	56.00	2.90-56.00	3/31/2020	NO	n/a
THALLIUM TOTAL (ppb)	2	0.5	0.6	0.0- 0.6	3/10/2020	NO	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Middleton 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 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 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, 800-426-4791, or at www.epa.gov/safewater/lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Radioactive Contaminants							
Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
COMBINED URANIUM(ug/l)	30	0	2.1	0.0-2.1	4/1/2020	No	Erosion of natural deposits
RADIUM, (226+228)(pCi/l)	5	0	3.5	0.0- 3.5	3/10/2020	NO	Erosion of natural deposits
Gross Alpha, Excl. R&U(pCi/l)	15	0	4.1	0.2-4.1	3/31/2020	NO	Erosion of natural deposits
Gross Alpha, Incl. R&U (n/a)	n/a	n/a	4.1	0.0- 4.1	3/31/2020	NO	Erosion of natural deposits

Disinfection Byproducts - Trihalomethanes and Halo Acidic Acids							
Contaminant (units)- Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
Total THM (ppb)- D1	80	0	13.2	10.6-16.5		NO	By-product of Drinking Water Chlorination
Total THM (ppb)- D2	80	0	4.5	0.0-8.5		NO	By-product of Drinking Water Chlorination
HAA5 (ppb)- D1	60	60	6	4-8		NO	By-product of Drinking Water Chlorination
HAA5 (ppb)- D2	60	60	3	0-6		NO	By-product of Drinking Water Chlorination

Some people who drink water containing trihalomethanes (THM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

The following tables list contaminants which were detected in your water and that have either a Health Advisory Level (HAL) or a Secondary Maximum Contaminant Level (SMCL), or both. There are no violations for detections of contaminants that exceed Health Advisory Levels, Groundwater Standards or 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. Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Contaminants with a Health Advisory Level or a Secondary Maximum Contaminant Level							
Contaminant (units)	SMCL	HAL	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
ALUMINUM(ppm)	0.05	0.2	0.02	0.00-0.02	5/24/2017	NO	Runoff/leaching from natural deposits
BROMIDE(ppm)	n/a	n/a	0.048	0.0-0.048	8/14/2020	NO	n/a
CHLORIDE(ppm)	250		170	0.42-170		NO	Runoff/leaching from natural deposits, road salt, water softeners
IRON(ppm)	0.3		0.10	0.00-0.10	5/24/2017	NO	Runoff/leaching from natural deposits, industrial wastes
MANGANESE(ppm)	0.05	0.3	0.040	0.0-0.040	8/14/2020	NO	Leaching from natural deposits
SILVER(ppm)	0.1	0.05	0.0	0.0-0.0	6/16/2017	NO	Runoff from industrial wastes
SULFATE (ppm)	250		31.00	1.80-31.00	3/10/2020	NO	Runoff/leaching from natural deposits, industrial wastes
ZINC(ppm)	5		0.01	0.0-0.01	5/24/2017	NO	Runoff/leaching from natural deposits, industrial wastes

Synthetic Organic Contaminants including Pesticides and Herbicides							
Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
ATRAZINE (ppb)	3	3	0.0	0.0-0.0	6/19/2017	NO	Runoff from herbicide used on row crops

Explanation of Test Results

We are proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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 that the 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 at 800-426-4791. 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 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 microbiological contaminants are available from the Safe Drinking Water Hotline 800-426-4791.

Please call the **Middleton Water Utility at 608-821-8370** if you have any questions.