City of Appleton

2023 Water Quality Report

The Appleton Water Utility provides safe, abundant drinking water to the City of Appleton, Harrison Utilities, the Town of Grand Chute, and the Village of Sherwood. The Appleton Water Utility wants you to be confident in the safety and reliability of the water you get every time you turn on the tap. The utility is a self-financed enterprise owned by the City of Appleton. Appleton water meets federal and state health-protection standards. It is regulated by the Public Service Commission (PSC) of Wisconsin, the U.S. Environmental Protection Agency (EPA), and the Wisconsin Department of Natural Resources (WDNR). The Appleton Water Treatment Facility treats Lake Winnebago water with a multiple-step process that deactivates and destroys illness-causing micro-organisms while removing other contaminants. The water is lime softened and filtered through granular activated carbon for turbidity removal. Ultraviolet Light is used as a disinfection process for Cryptosporidium. Fluoride is added for dental health. Finally, chlorine disinfection provides safe, drinking water throughout the distribution system and to your faucets.

Source of Appleton's Drinking Water

The source of Appleton's drinking water is Lake Winnebago. Lake Winnebago is in the Fox and Wolf River watersheds. Water in the watershed can travel hundreds of miles. As water flows over land surfaces and through rivers and lakes, naturally occurring substances may become dissolved in the water. The substances are called contaminants. Surface water sources can become susceptible to stormwater pollution. For information on how stormwater pollution can impact our water bodies visit www.fwwa.org Surface water is also affected by animal and human activities. For more information on impacts to your source of drinking water see the "Source Water Assessment for Appleton Waterworks" available at: https://www.appleton.org/home/showpublisheddocument/25347 To obtain a summary of the source water assessment please contact, Chris Stempa at (920) 997-4200.

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, 1-800-426-4791

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. Appleton 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 at www.epa.gov/safewater/lead.

DEPARTMENT OF UTILITIES
WATER TREATMENT FACILITY
2281 Manitowoc Road
Menasha, WI 54952-8924
920-997-4200 • FAX 920-997-3240

Important Information

This report contains important information about your drinking water. Please contact Chris Stempa if you would like to know more about the information contained in this report (920) 997-4200 or chris.stempa@appleton.org

Información importante!

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Dlaim ntawv tshaabzu nuav muaj lug tseemceeb heev nyob rua huv kws has txug cov dlej mej haus. Kuas ib tug paab txhais rua koj, los nrug ib tug kws paub lug thaam.

This report contains important information about your drinking water. Have someone translate it for you or talk to someone who understands it.

The Utilities Committee meets TUESDAY of the week following Common Council at 4:30 p.m., in Committee Room 6A of City Center. Please go to https://cityofappleton.legistar.com/Calendar.aspx for meeting dates and agendas.

Direct payments of your utility billing are available. Please see the City's website:
http://www.appleton.org/government/finance/city-services-invoices

Information for Persons with Compromised Immune Systems

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 healthcare 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, 1-800-426-4791.

Safe Drinking Water On Tap

The Safe Drinking Water Act provides a regulatory framework to maintain and protect water supplies. To get an easy to read EPA booklet on drinking water go to: https://www.epa.gov/ground-water-and-drinking-water

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:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, 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 of 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 can also come from gas stations, urban stormwater runoff and septic systems.
- 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.

Definitions

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

HA and HAL – HA: Health Advisory. An estimate of acceptable drinking water levels for a chemical substance based on health effects information. HAL: Health Advisory Level is a concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice. Health Advisories are determined by the US EPA.

HI – Hazard Index: A Hazard Index is used to assess the potential health impacts associated with mixtures of contaminants. Hazard Index guidance for a class of contaminants or mixture of contaminants may be determined by the US EPA or Wisconsin Department of Health Services. If a Health Index is exceeded a system may be required to post a public notice.

Level 1 Assessment – A Level 1 assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

Level 2 Assessment – A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred or why total coliform bacteria have been found in our water system, or both, on multiple occasions.

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.

MFL – million fibers per liter

MRDL – Maximum residual disinfectant level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG – Maximum residual disinfectant level goal; 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 contaminants.

mrem/year – millirems per year (a measure of radiation absorbed by the body)

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 (mg/l)

ppq – parts per quadrillion, or picograms per liter

PHGS – Public Health Groundwater Standards are found in NR 140 Groundwater Quality. The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public health notice.

RPHGS – Recommended Public Health Groundwater Standards: Groundwater standards proposed by the Wisconsin Department of Health Services. The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public health notice.

SMCL – Secondary drinking water standards or Secondary Maximum Contaminant Levels for contaminants that affect taste, odor, or appearance of drinking water. The SMCLs do not represent health standards.

TCR – Total Coliform Rule

TT – Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which 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 with the last 5 years, it will appear in the tables below with the sample date.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
HAA5 (ppb)	N-10	60	60	18	13-23		No	By-product of drinking water chlorination
TTHM (ppb)	N-10	80	0	35.0	23.0-40.0		No	By-product of drinking water chlorination
HAA5 (ppb)	N-11	60	60	18	14-25		No	By-product of drinking water chlorination
TTHM (ppb)	N-11	80	0	34.8	21.6-41.0		No	By-product of drinking water chlorination
HAA5 (ppb)	N-13	60	60	18	14-23		No	By-product of drinking water chlorination.
TTHM (ppb)	N-13	80	0	35.5	22.9-42.0		No	By-product of drinking water chlorination
HAA5 (ppb)	N-2	60	60	16	12-22		No	By-product of drinking water chlorination
TTHM (ppb)	N-2	80	0	33.3	19.5-42.8		No	By-product of drinking water chlorination
HAA5 (ppb)	N-4	60	60	17	13-23		No	By-product of drinking water chlorination
TTHM (ppb)	N-4	80	0	36.3	20.8-43.1		No	By-product of drinking water chlorination
HAA5 (ppb)	N-9	60	60	17	13-23		No	By-product of drinking water chlorination
TTHM (ppb)	N-9	80	0	34.3	19.9-44.8		No	By-product of drinking water chlorination
HAA5 (ppb)	S-4	60	60	16	13-20		No	By-product of drinking water chlorination
TTHM (ppb)	S-4	80	0	33.6	19.5-34.8		No	By-product of drinking water chlorination
HAA5 (ppb)	S-6	60	60	16	13-20		No	By-product of drinking water chlorination
TTHM (ppb)	S-6	80	0	33.6	20.8-41.7		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
Barium (ppm)	2	2	0.004	0.004		None	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.6	0.6		None	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. SMCL = 4.0 ppm
Nitrate (N03-N) (ppm)	10	10	0.59	0.59		None	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	n/a	n/a	15	15		None	n/a

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	0.0530	0 of 30 results were above the action level.	7-13-20	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	AL=15	0	11.00	0 of 30 results were above the action level.	7-20-20	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unregulated Contaminant Monitoring Rule (UCMR5)

Appleton participated in UCMR5 testing, and the detects from those samples are reported in the PFAS Contaminants section.

PFAS Contaminants with a Recommended Health Advisory Level

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 1950's. The following table lists PFAS contaminants which were detected in your water and that have a Recommended Public Health Groundwater Standard (RPHGS) or Health Advisory Level (HAL). There are no violations for detections of contaminants that exceed the RPHGS or HAL. The RPHGS are levels at which concentrations of the contaminant present a health risk and are based on guidance provided by the Wisconsin Department of Health Services.

Typical Source of Contaminant	Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and release from consumer products in landfills				
Contaminant (units)	Site	RPHGS or HAL (PPT)	Level Found	Range	Sample Date (if prior to 2023)
PFBS (ppt)	EP-81	450000	0.82	0.82	
PFHXS (ppt)	EP-81	40	0.59	0.59	
PFHXA (ppt)	EP-81	150000	0.50	0.50	
PFOS (ppt)	EP-81	20	1.00	1.00	
PFOA (ppt)	EP-81	20	1.40	1.40	
PFOA and PFOS Total (ppt	EP-81	20	2.40	2.40	

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
Combined Uranium (ug/l)		30	0	0.4	0.4	4-13-20	No	Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
Atrazine (ppb)		3	3	0.1	0.0-0.1		No	Runoff from herbicide used on row crops

Contaminants with a Public Health Groundwater Standard, Health Advisory Level, or a Secondary Maximum Contaminant Level

The following table lists contaminants which were detected in your water and that have either a Public Health Groundwater Standard (PHGS), 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, Public Health 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. Public Health Groundwater Standards and Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Contaminant (units)	Site	SMCL (ppm)	PHGS or HAL (ppm)	Level Found	Range	Sample Date (if prior to 2023)	Typical Source of Contaminant
Aluminum (ppm)		0.05	0.2	0.04	0.04	7-14-20	Runoff/leaching from natural deposits
Chloride (ppm)		250		21.00	21.00	9-7-22	Runoff/leaching from natural deposits, road salt, water softeners
Sulfate (ppm)		250		35.00	35.00		Runoff/leaching from natural deposits, industrial wastes

Unregulated Contaminants

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.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2023)
Metolachlor (Dual) (ppb)	0.03	0.02-0.03	

Turbidity Monitoring

In accordance with NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month and never exceeds 1 NTU. In 2023, the highest single entry point turbidity measurement was 0.08 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

Monitoring Violations

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the compliance period we did not have any monitoring violations.