

City of Appleton

2022 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 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 microorganisms 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 100 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>

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

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 undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, 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>



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WATER TREATMENT FACILITY
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Important Information

This report contains important information about your drinking water. Please contact Chris Shaw if you have any questions. (920) 997-4200 or chris.shaw@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>

Lead and Copper Monitoring

The Utility is required to periodically test for lead in the drinking water of homes. Currently there are 30 sites throughout the City that are tested for lead and copper every three years. Lead can enter the drinking water by corrosion of home plumbing. For the last test year, 2020, 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. Appleton Waterworks is responsible for providing high quality drinking water but cannot control the variety of materials used in private plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap until it runs cold before using water for drinking and cooking.

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 2022, the highest single entry point turbidity measurement was 0.10 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

Unregulated Compound Monitoring Requirement

Unregulated contaminants are those for which the USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The Appleton Water Utility participated in this monitoring.

Appleton Water Treatment Facility - Safe Water on Tap

The table below identifies the regulated substances detected in the 2022 Appleton water regulatory testing. Every regulated substance that is detected, even in trace amounts, is listed here. The levels detected for these contaminants were all below levels allowed by state and federal regulations in 2022.

Contaminant (units)	MCL	MCLG	Level Found	Range	Violation	Typical Source of Contaminant
Atrazine (ppb) (2020)	3	3	0.1	0.0-0.1	None	Runoff from herbicides used on row crops.
Barium (ppm)	2	2	0.005	0.005	None	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper (ppm) (2020)	AL=1.3	1.3	0.053	0 of 30 results were above the action level	None	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Fluoride (ppm)	4	4	0.7	0.7	None	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. SMCL = 4.0 ppm
Hexachlorocyclopentadiene (ppb) (2020)	50	50	0.0	0.0-0.0	None	Discharge from chemical factories.
Lead (ppb) (2020)	AL=15	0	11	0 of 30 results were above the action level	None	Corrosion of household plumbing systems; Erosion of natural deposits
Metolachlor (Dual)(ppb) (2020)	n/a	n/a	0.03	0.03-0.03	None	n/a
Nitrate (NO3-N) (ppm)	10	10	0.13	0.13	None	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radium (226 + 228) (pCi/l) (2020)	5	0	0.71	0.33-0.38	None	Erosion of natural deposits
Sodium (ppm)	n/a	n/a	13	13	None	n/a
Combined Uranium (ppb) (2020)	30	0	0.4	0.4	None	Erosion of natural deposits.

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)	SMCL	PHGS	Level Found	Range	Violation	Typical Source of Contaminant
Aluminum (ppm) (2020)	0.05	0.2	0.04	0.04	None	Runoff/leaching from natural deposits
Chloride (ppm) (2020)	250	n/a	21	21	None	Runoff/leaching from natural deposits, road salt, water softeners
Sulfate (ppm) (2020)	250	n/a	36	36	None	Runoff/leaching from natural deposits, industrial wastes

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 2022)	Violation	Typical Source of Contaminant
HAA5 (ppb)	N-10	60	60	18	11-22		No	By-product of drinking water chlorination
TTHM (ppb)	N-10	80	0	36.9	23.8-43.0		No	By-product of drinking water chlorination
HAA5 (ppb)	N-11	60	60	18	13-24		No	By-product of drinking water chlorination
TTHM (ppb)	N-11	80	0	37.8	25.0-45.3		No	By-product of drinking water chlorination
HAA5 (ppb)	N-13	60	60	18	12-24		No	By-product of drinking water chlorination.
TTHM (ppb)	N-13	80	0	37.5	23.9-43.6		No	By-product of drinking water chlorination
HAA5 (ppb)	N-2	60	60	17	10-22		No	By-product of drinking water chlorination
TTHM (ppb)	N-2	80	0	36.0	22.0-43.9		No	By-product of drinking water chlorination
HAA5 (ppb)	N-4	60	60	17	11-22		No	By-product of drinking water chlorination
TTHM (ppb)	N-4	80	0	38.2	23.9-44.3		No	By-product of drinking water chlorination
HAA5 (ppb)	N-9	60	60	17	11-22		No	By-product of drinking water chlorination
TTHM (ppb)	N-9	80	0	36.8	22.6-42.9		No	By-product of drinking water chlorination
HAA5 (ppb)	S-4	60	60	16	10-21		No	By-product of drinking water chlorination
TTHM (ppb)	S-4	80	0	34.2	20.7-42.5		No	By-product of drinking water chlorination
HAA5 (ppb)	S-6	60	60	17	10-21		No	By-product of drinking water chlorination
TTHM (ppb)	S-6	80	0	36.2	21.9-42.8		No	By-product of drinking water chlorination

Unregulated Contaminant Monitoring Rule (UCMR4)¹

Metals	Year Sampled	Amount Detected (average)	Range of Detections (lowest – highest)	Typical Source
Germanium	2018	<0.3 ug/L	<0.3 ug/L	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications
Manganese	2018	0.57 ug/L	0.46 – 1.83 ug/L	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Pesticides and Pesticide Manufacturing Byproduct	Year Sampled	Amount Detected	Range of Detections	Typical Source
alpha-Hexachlorocyclohexane	2018	<0.01 ug/L	<0.01 ug/L	Component of benzene hexachloride (BHC); formerly used as an insecticide.
Atrazine	2017	0.046 ug/L	0.00-0.046 ug/L	Used as an herbicide
Chlorpyrifos	2018	<0.03 ug/L	<0.03 ug/L	Organophosphate; used as an insecticide, acaricide and miticide
Dimethipin	2018	<0.2 ug/L	<0.2 ug/L	Used as a herbicide and plant growth regulator
Ethoprop	2018	<0.03 ug/L	<0.03 ug/L	Used as an insecticide
Oxyfluorfen	2018	<0.05 ug/L	<0.05 ug/L	Used as an herbicide
Metolachlor (DUAL)	2017	0.013 ug/L	0.00-0.013 ug/L	Used as an herbicide
Profenofos	2018	<0.3 ug/L	<0.3 ug/L	Used as an insecticide and acaricide
Tebuconazole	2018	<0.2 ug/L	<0.2 ug/L	Used as a fungicide
total Permethrin (cis- & trans-)	2018	<0.04 ug/L	<0.04 ug/L	Used as an insecticide
Tribufos	2018	<0.07 ug/L	<0.07 ug/L	Used as an insecticide and cotton defoliant
Butylated – Hydroxyanisol	2018	<0.03 ug/L	<0.03 ug/L	Used as a food additive (antioxidant)
o-Toluidine	2018	<0.007 ug/L	<0.007 ug/L	Used in the production of dyes, rubber, pharmaceuticals, hair preparations, and skin lotions
Quinoline	2018	<0.002 ug/L	<0.002 ug/L	Used as a pharmaceutical (antimalarial), flavoring agent, produced as a chemical intermediate, a component of coal

Unregulated Contaminant Monitoring Rule (UCMR4)¹

Alcohols	Year Sampled	Amount Detected (average)	Range of Detections (lowest – highest)	Typical Source
1-butanol	2018	<0.2.0 ug/L	<2.0 ug/L	Used as a solvent, food additive and in production of other chemicals
2-methoxyethanol	2018	<0.4 ug/L	<0.4 ug/L	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions
2-propen-1-ol	2018	<0.5 ug/L	<0.5 ug/L	Used in the production flavorings, perfumes and other chemicals
Disinfection Byproducts	Year Sampled	Amount Detected (average)	Range of Detections (lowest – highest)	Typical Source
Total Haloacetic Acids (HAA5) Summation of dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid	2018	19.4 ug/L	13.8 – 24.7 ug/L	Byproduct of drinking water disinfection
Total Brominated Haloacetic Acids (HAA6Br) bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, chlorodibromoacetic acid, monobromoacetic acid, tribromoacetic acid	2018	2.7 ug/L	2.3 – 5.7ug/L	Byproduct of drinking water disinfection
Total Haloacetic Acids (HAA9) Summation of bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, and trichloroacetic acid.	2018	22.1 ug/L	16.1 – 27.4 ug/L	Byproduct of drinking water disinfection

¹Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

Definitions and Notes

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

Haloacetic Acids – Total of Mono-, di-, and tri-chloroacetic acid; mono- and di-bromoacetic acid; and bromochloroacetic acids

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.

n/a – Not Applicable

pCi/l – Picocuries per liter (a measure of radioactivity)

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 notice.

ppb – Parts per billion, or micrograms per liter (ug/l)

ppm – Parts per million, or milligrams per liter (mg/l)

ppt – Parts per trillion, or nanograms per liter (ng/l)

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 Maximum Contaminant Level: Inorganic chemicals that are not hazardous to health but may be objectionable to an appreciable number of persons.

Trihalomethanes, Total – Total of chloroform, bromo-dichloromethane, dibromochloromethane and bromoform

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 list 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)	Water Plant Site	RPHGS or HAL (PPT)	Level Found	Range	Sample Date (if prior to 2022)
PFBS (ppt)	EP-81	450000	0.62	0.62	NA
PFHXS (ppt)	EP-81	40	0.45	0.45	NA
PFHXA (ppt)	EP-81	150000	1.10	1.10	NA
PFOS (ppt)	EP-81	20	0.85	0.85	NA
PFOA (ppt)	EP-81	20	1.20	1.20	NA

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 noted in the table below, we did not complete all monitoring or testing for the contaminant(s) noted, and therefore cannot be sure of the quality of your drinking water during that time.

Description	Contaminant Group	Sample Location	Compliance Period Beginning	Compliance Period Ending
Chem M/R – Reg – No Regular Samples	Fluoride	Distribution System	5/1/2022	5/31/2022
Chem M/R – Reg – No Regular Samples	Fluoride	Distribution System	6/1/2022	6/30/2022

Actions Taken:

A review of records indicated that City of Appleton did not collect a monthly fluoride split sample for either May or June 2022 for confirmation. Appleton Water regularly monitors your drinking water to make sure your drinking water

meets health standards. During the compliance period noted above, the required monitoring for fluoride was not fully completed due to an error by utility staff. Be advised that fluoride was tested for daily. However, a split sample was not sent to the State laboratory for confirmation, and therefore the water utility cannot be certain of the data during that time. To ensure this will not happen again, utility staff have made changes to operating procedures.