



DEPARTMENT OF UTILITIES

Department of Utilities
Water Treatment Facility
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City of Appleton 2024 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 tap 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 more information on this topic, please visit https://dnr.wisconsin.gov/topic/Stormwater/learn_more/problems.html. To obtain information on the source water for Appleton you may contact a Utilities Department representative at (920) 997-4200 or email: waste_water@appleton.org.

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.

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.

Important Information

This report contains important information about your drinking water. Please contact a Utilities Department representative if you would like to know more about the information contained in this report at (920) 997-4200 or email: waste_water@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: <https://cms2.revize.com/revize/appletonwi/Documents/Finance/utility.pdf>

Or pay your utility bill online at: <https://client.pointandpay.net/web/CityofAppletonWIUtilityBilling>

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 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 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.

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>.

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 (ng/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 within 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 2024)	Violation	Typical Source of Contaminant
HAA5 (ppb)	N-10	60	60	16	14-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-10	80	0	28.3	19.4-28.3		No	By-product of drinking water chlorination
HAA5 (ppb)	N-11	60	60	18	13-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-11	80	0	30.3	19.3-27.9		No	By-product of drinking water chlorination
HAA5 (ppb)	N-13	60	60	17	13-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-13	80	0	30.9	20.4-30.7		No	By-product of drinking water chlorination
HAA5 (ppb)	N-2	60	60	15	12-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-2	80	0	29.5	20.0-26.9		No	By-product of drinking water chlorination
HAA5 (ppb)	N-4	60	60	16	12-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-4	80	0	30.1	19.9-29.9		No	By-product of drinking water chlorination
HAA5 (ppb)	N-9	60	60	16	11-17		No	By-product of drinking water chlorination
TTHM (ppb)	N-9	80	0	30.5	19.9-27.6		No	By-product of drinking water chlorination
HAA5 (ppb)	S-4	60	60	15	12-15		No	By-product of drinking water chlorination
TTHM (ppb)	S-4	80	0	27.5	18.4-25.8		No	By-product of drinking water chlorination
HAA5 (ppb)	S-6	60	60	16	12-16		No	By-product of drinking water chlorination
TTHM (ppb)	S-6	80	0	30.1	20.6-26.7		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2024)	Violation	Typical Source of Contaminant
ARSENIC (ppb)		10	n/a	0	0		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.003	0.003		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)		100	100	1	1		No	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE (ppm)		4	4	0.6	0.6		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		0.3200	0.3200		No	Nickel occurs naturally in soils, ground water and surface water and is often used in electroplating, stainless steel alloy products.
NITRATE (NO3-N) (ppm)		10	10	0.45	0.45		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	14.00	14.00		No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	Range	# of Results	Sample Date (if prior to 2024)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.074	0.0091 - 0.1390	0 of 75 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	0.97	0.00 - 6.20	0 of 75 results were above the action level.		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. 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.

Note: The recommended health-based levels in the table below were in effect in 2024. These levels were revised by WDHS in 2025. They can be found here <https://www.dhs.wisconsin.gov/water/gws.htm>.

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 2024)
PFBA (ppt)		10000	5.9	5.9	9/10/2024
PFBS (ppt)		450000	0.82	0.82	1/4/2023
PFHXS (ppt)		40	0.59	0.59	1/4/2023
PFOS (ppt)		20	1.00	1.00	1/4/2023
PFOA (ppt)		20	1.40	1.40	1/4/2023
PFHXA (ppt)		150000	0.50	0.50	1/4/2023
PFOA and PFOS Total (ppt)		20	2.40	2.40	1/4/2023

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2024)	Violation	Typical Source of Contaminant
Combined Uranium (ug/l)		30	0	0.4	0.4	4/13/2020	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 2024)	Violation	Typical Source of Contaminant
Atrazine (ppb)		3	3	0.1	0.0-0.1	4/18/2023	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 2024)	Violation Typical Source of Contaminant
ALUMINUM (ppm)		0.05	0.2	0.04	0.04	7/14/2020	Runoff/leaching from natural deposits
CHLORIDE (ppm)		250		21.00	21.00	9/7/2022	Runoff/leaching from natural deposits, road salt, water softeners
SULFATE (ppm)		250		36.00	36.00		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 2024)
METOLACHLOR (DUAL) (ppb)	0.03	0.02-0.03	4/18/2023

Additional Health Information

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), 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 and removing lead pipes, but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact Appleton Waterworks (Michael Suha at (920) 997-4200). Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

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 2024, the highest single entry point turbidity measurement was 0.16 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

Additional information on Service Line Materials

We were required to develop an initial inventory of service lines connected to our distribution system by October 16, 2024 and to make the inventory publicly accessible. You can access the service line inventory here:

https://appletonwi.gov/government/departments/public_works/water_distribution/lead.php

Triennial WDNR Sanitary Survey

A Sanitary Survey is conducted by the WDNR every three years. The WDNR performs a comprehensive inspection of a public water system as part of the survey to ensure it complies with state and federal drinking water regulations. The primary purpose is to identify any conditions that may present a risk to public health and to ensure the water system is properly maintained, operated, and managed. The 2024 Sanitary Survey identified final findings and items to be addressed by the Appleton Water Utility. A plan and associated timeline for corrective action is to be submitted to the DNR by a scheduled corrective action date. The deficiencies identified in the table below are tasks that remain to be addressed in 2025. It should be noted that the corrective actions for some deficiencies (e.g. clarifier overflow screening) may require a request for extension to satisfactorily complete the work because of the level of engineering, construction, and costs involved.

Uncorrected Significant Deficiencies

Deficiency Description and Progress to Date	Date System Notified	Scheduled Correction Date
Vents on elevated water storage facilities shall be constructed to exclude insects and dust to extent possible. The screen openings on the tower vents are larger than the required 4-mesh.	11/13/2024	9/30/2025
The overflows from the clarifiers combine with a storm sewer drain and then flow to an open outlet downslope from the treatment plant. Per s. NR 811.47(d)(8), the overflow shall have a downturned pipe elbow over a concrete splash pad and shall be covered with a 4-mesh corrosion resistant screen. Per s. NR 811.64(4)(a), discharges from overflows shall have a 12 to 24-inch air break over a storm sewer and shall be visible.	11/13/2024	5/30/2025
The sides of all vents on storage structures shall totally cover any screens when viewing the vent from the side in order to prevent debris, dust and insects, carried by wind or rain, from entering the clearwell. The screening on the North elevated tower vent is visible from the side.	11/13/2024	5/30/2025
The overflow from the clearwells is not appropriately screened per s.NR 811.64(4), Wis.Adm. Code. There are also several non-conforming features associated with this overflow outlined in the NCF section.	11/13/2024	5/30/2025



Appleton Wins 2024 Best Tasting Water in Wisconsin!

The Wisconsin Section of American Water Works Association has recognized Appleton drinking water as the best tasting water in the state at the annual fall conference.