2025 Bottled Drinking Water Report

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Food and Recreational Safety

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Introduction

State law [Wis. Stat. § 97.34(2)(e)] requires the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) to compile and publish an annual bottled drinking water report. It is a compilation of the laboratory results for bottled drinking water sampled in Wisconsin for fiscal year 2025 (July 1, 2024-June 30, 2025). The samples were collected from bottled drinking water processors and retail sites in the state. The collection and analysis are a coordinated effort by DATCP's Division of Food and Recreational Safety, DATCP's Bureau of Laboratory Services within the Division of Management Services, and the Wisconsin State Laboratory of Hygiene.

There are 19 bottled drinking water processors in Wisconsin. The processors are licensed by DATCP as food processing plants under the category "Wholesale Food Manufacturing" and are required to comply with the same quality and safety standards as municipal water systems. Processors are licensed and regulated under the following Wisconsin Administrative Codes:

- § ATCP 70 - Wholesale Food Manufacturing
- § NR 809 - Safe Drinking Water
- § NR 140.10 - Groundwater Quality

To provide reasonable assurance of compliance with state health-related standards, bottling drinking water processors have specific requirements for product sampling, analysis, record keeping, and reporting. They test for bacteria each week, and nitrates, volatile organics, pesticides, inorganics, and radionuclides every year. The processor maintains the results of the analyses for at least two years.

Mid-fiscal year 2025, DATCP collected and analyzed samples of at least two gallons of bottled drinking water from each of 19 licensed food processing plants. These samples included water from both private wells and municipal water sources. The samples were analyzed for substances that are either contaminants of public health concern or aesthetic defects. The substances and their regulatory limits are included in the enforcement standards tables starting on page three.

All the 2025 samples met current public health enforcement standards (Wis. Admin. Code § NR 140.10).

Background

There is no such thing as naturally pure water. In nature, all water contains some impurities. As water flows in streams, accumulates in lakes, and filters through layers of soil and rock in the ground, it dissolves or absorbs many of the substances that it touches. Some of these substances are harmless. Some people prefer mineral water because minerals give it an appealing taste. However, at certain levels, just like man-made chemicals, minerals may be considered contaminants that can make water distasteful or even unsafe.

Man-made Contaminants

Man-made contaminants may also affect water that is bottled. These contaminants may be substances discharged from factories, applied to farmlands, or used by consumers in their homes and yards. Microbiological and chemical contaminants can enter water supplies via many routes. These materials can be the result of human activity or can be found in nature. For instance, chemicals can migrate from disposal sites and contaminate sources of drinking water. Coliform bacteria from human and animal wastes may be found in drinking water if the water is not properly treated or disinfected.

Coliform bacteria are used as indicators that other harmful organisms may be in the water. If coliform bacteria are found in a water sample, further testing is conducted to see if there are any fecal or pathogenic bacteria present.

Water naturally contains less than one milligram of nitrate-nitrogen per liter. When higher levels are present, it indicates that the water has been contaminated. Common sources of nitrate contamination include fertilizer, animal wastes, septic tanks, municipal sewage treatment systems, and decaying plant debris. State and federal laws set the maximum allowable level of nitrate-nitrogen in public drinking water at 10 milligrams per liter.

Natural Contaminants

Naturally occurring contaminants can also be found in drinking water. Some contaminants come from erosion of natural rock formations. Groundwater, that moves slowly through the pores or cracks in underground layers of rock, dissolves minerals as it travels. Dissolved solids can be calcium, magnesium, salt, iron, or other minerals. Some of these dissolved solids may actually come out of solution during storage if the water becomes cold enough or if some of the water evaporates. These precipitates are not harmful but may not be appealing to the public.

Fluoride can be added to water supplies to promote healthy teeth. It can also be present in water from the erosion of natural deposits or discharge from fertilizer and aluminum factories.

Water can also pick up naturally occurring radium or man-made radionuclides as it flows to the water source. The radioactive gas radon-222 occurs in certain types of rock and can leach into ground water. Most rock contains some radium, usually in small amounts. The testing process for water samples begins with a screening for gross alpha/beta particle activity which measures the total amount of one type of radioactivity given off by the water. If high levels of gross alpha/beta activity are found, further testing for radium is conducted. Radioactivity levels are measured in picocuries per liter of water (abbreviated pCi/L).

In Wisconsin, most of the community water supplies which exceed the radium standard draw water from a deep sandstone aquifer and are located in a narrow band which stretches from Green Bay to the Illinois state line. In addition, a few high radium levels have been found in groundwater from sandstone formations in west central Wisconsin and in granite formations in north central Wisconsin. In all cases, the radium was present in the rock and water long before the first well was drilled.

Bottled Drinking Water Regulation

On May 13, 1996, the U.S. Food and Drug Administration (FDA) released regulations to alleviate consumer confusion about the many different types of bottled drinking water on the market. FDA provided standard definitions for the terms artesian water, ground water, mineral water, purified water, sparkling bottled drinking water, spring water, sterile water, well water, and others.

Bottled drinking water, like all other foods regulated by FDA, must be processed, packaged, shipped, and stored in a safe and sanitary manner and be truthfully and accurately labeled. Bottled drinking water products must also meet specific FDA quality standards for contaminants. Since 1996, mineral water must also meet the bottled drinking water standards; it had previously been exempt from standards that applied to other bottled drinking water.

FDA Definitions

- Bottled drinking water: Water that is intended for human consumption and that is sealed in bottles or other containers with no added ingredients except that it may contain safe and suitable antimicrobial agents.
- Artesian water or artesian well water: Water from a well tapping a confined aquifer in which the water level stands at some height above the top of the aquifer.
- Ground water: Water from a subsurface saturated zone that is under a pressure equal to or greater than atmospheric pressure.
- Mineral water: Water containing not less than 250 parts per million total dissolved solids, originating from an underground water source. No minerals may be added to this water.
- Purified water: Water that is produced by distillation, deionization, reverse osmosis, or other suitable processes and that meets the definition of purified water in the U.S. Pharmacopeia, 23d Revision, January 1, 1995.
- Sparkling bottled water: Water that, after treatment and possible replacement of carbon dioxide, contains the same amount of carbon dioxide that it had at emergence from the source.
- Spring water: Water derived from an underground formation from which water flows naturally to the surface of the earth.
- Well water: Water from a hole bored, drilled, or otherwise constructed in the ground, which taps the water of an aquifer.

In addition to defining these terms, the regulation addresses various other labeling concerns. For example, water bottled from municipal water supplies must be clearly labeled as from a community water system, or

alternatively, from a municipal source, unless it is processed sufficiently to be labeled as distilled or purified water.

The regulation also requires accurate labeling of bottled drinking water marketed for infants. If a product is labeled sterile it must be processed to meet FDA's requirements for commercial sterility. Otherwise, the labeling must indicate that it is not sterile and should be used in preparation of infant formula only as directed by a physician or according to infant formula preparation instructions.

Summary of Results for Fiscal Year 2025

All detectable levels for substances of public health concern were below enforcement standards.

Enforcement Standards for Safety

Contaminants	Number Positive	Percent Positive	Average Value of Positive Results	Enforcement Level	Percent of Regulatory Limit
N-nitrate/nitrite	7	37%	2.44 mg/L	10 mg/L	24.4%
Pesticide – Alachlor ESA	3	16%	0.068 μg/L	20 μg/L	0.34%
Pesticide – De-ethyl Atrazine + Diamino Atrazine	2	10%	0.089 μg/L (sum)	3 μg/L	2.97%
Pesticide – Metolachlor ESA	3	16%	0.196 μg/L	1300 μg/L	0.015%
Gross Alpha	19	100%	0.746 pCi/l	15.0 pCi/L	4.97%
Gross Beta	19	100%	0.919 pCi/L	50 pCi/L	1.84%

mg/L = Milligrams per Liter

μg/L = Micrograms per Liter

pCi/L = Picocuries per Liter

mL = Milliliter

Quality and Aesthetic Standards[1]

Analyses were conducted for secondary inorganic chemical and physical standards (Wis. Admin. Code § NR 809.70). These address the aesthetic quality of drinking water such as taste, odor, and appearance.

Contaminants	Number Positive	Percent Positive	Average Value of Positive Results	Secondary Standard Level	Percent of Regulatory Limit	Test Sensitivity
Chloride	14	74%	14.08 mg/L	250 mg/L	5.63%	2.0 mg/L
Copper*	0	0%	0 mg/L	1.0 mg/L	0%	20.0 µg/L
Fluoride*	3	16%	0.374 mg/L	2.0 mg/L	18.7%	0.20 mg/L
Iron	1	5%	0.077 mg/L	0.3 mg/L	25%	50.0 µg/L
Sulfate	3	16%	15.9 mg/L	250 mg/L	6.4%	10 mg/L
Total Dissolved Solids	18	95%	190 mg/L	500 mg/L	38%	10 mg/L
Zinc	0	0%	0 mg/L	5 mg/L	0%	10.0 µg/L

[1] Aesthetic Standard from NR 809.70 Register, November 2024

* The primary maximum contaminant level for copper is 1.3 mg/L. The secondary standard for copper is 1.0 mg/L. The primary maximum contaminant level for fluoride is 4.0 mg/L. The secondary standard for fluoride is 2.0 mg/L.

mg/L = Milligrams per Liter

µg/L = Micrograms per Liter

Public Health Groundwater Quality Standards and Reporting Limits[2]

Items noted with an * were not detected in any of the samples

Test	Enforcement Standard	Reporting Limits
2,4,5-TP*	50 µg/L	0.0500 µg/L
2,4-D*	70 µg/L	0.0500 µg/L
Acetochlor*	7.0 µg/L	0.0500 µg/L
Acetochlor ESA*	‡	0.0500 µg/L
Acetochlor OA*	‡	0.300 µg/L
Alachlor*	2 µg/L	0.0500 µg/L
Alachlor ESA	20 µg/L	0.0500 µg/L
Atrazine*	‡‡	0.0500 µg/L
Bentazon*	300 µg/L	0.0500 µg/L
Carbaryl*	40 µg/L	0.0500 µg/L
Carbofuran*	40 µg/L	0.0500 µg/L
Chloramben*	150 µg/L	0.320 µg/L
Chlorpyrifos*	2 µg/L	0.0500 µg/L
Coliform Bacteria*	No presence	1/100 mL
Copper*	1300 µg/L	20.0 µg/L
Cyanide*	200 µg/L	10 µg/L
Dacthal*	70 µg/L	0.0500 µg/L
De-ethyl Atrazine	‡‡	0.0500 µg/L
Deisopropyl Atrazine*	‡‡	0.0500 µg/L
Diamino Atrazine*	‡‡	0.150 µg/L
Dicamba*	300 µg/L	0.250 µg/L
Dimethenamid*	50 µg/L	0.0500 µg/L
Dimethoate*	2 µg/L	0.0500 µg/L
Endrin*	2 µg/L	0.40 µg/L
EPTC*	250 µg/L	0.0500 µg/L
Gross Alpha	15 pCi/L	Sample Dependent
Gross Beta	50 pCi/L	Sample Dependent
Lead*	15 µg/L	0.500 µg/L
Lindane*	0.2 µg/L	0.020 µg/L
Methoxychlor*	40 µg/L	0.0500 µg/L
Metolachlor*	100 µg/L	0.0500 µg/L
Metolachlor ESA	‡‡‡	0.0500 µg/L
Metolachlor OA*	‡‡‡	0.270 µg/L
Metribuzin*	70 µg/L	0.0500 µg/L
N-Nitrate/Nitrite	10 mg/L	0.500 mg/L
Picloram*	500 µg/L	0.0500 µg/L
Prometon*	100 µg/L	0.0500 µg/L
Radium (combined)*	5 pCi/L	Sample Dependent
Simazine*	4 µg/L	0.0500 µg/L
Toxaphene*	3 µg/L	0.500 µg/L
Trifluralin*	7.5 µg/L	0.0500 µg/L

‡ The enforcement standard for the sum of Acetochlor ESA + Acetochlor OA is 230 µg/L.

‡‡The enforcement standard for the sum of Atrazine and three breakdown products is 3 µg/L.

‡‡‡The enforcement standard for the sum of Metolachlor ESA + Metolachlor OA is 1.3 mg/L.

[2] From NR 140 Register, November 2024 and from NR 809 Register, November 2024

mg/L = Milligrams per Liter µg/L = Micrograms per Liter
pCi/L = Picocuries/Liter mL = Milliliter

Processor Test Results for Fiscal Year 2025

Please access the full Fiscal Year 2025 Bottled Water Test Results document on the DATCP website: FY2025BottledWaterProcessorTestResults.pdf

Informational Websites

Environmental Protection Agency

Drinking water and health: http://www.epa.gov/safewater/dwhealth.html

Wisconsin

- Department of Natural Resources drinking water website: https://dnr.wi.gov/topic/drinkingwater/
- DATCP Chapter 97 Food Regulation: http://docs.legis.wisconsin.gov/statutes/statutes/97