

2017 Consumer Confidence Report Data BRISTOL WATERWORKS VILLAGE OF, PWS ID: 23000505

Water System Information

If you would like to know more about the information contained in this report, please contact Randy R Kerkman at (262) 857-2368.

Opportunity for input on decisions affecting your water quality

Village of Bristol Board meets on the 2nd and 4th Monday at the Village Hall 7:00 pm.

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 (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 systems 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 microbial contaminants are available from the Environmental Protection Agency's safe drinking water hotline (800-426-4791).

Source(s) of Water

Source ID	Source	Depth (in feet)	Status
1	Groundwater	1155	Temp. out of Service as of 10/24/17
2	Groundwater	55	Active
3	Groundwater	1505	Active

To obtain a summary of the source water assessment please contact, Randy R Kerkman at (262) 857-2368.

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.

Definitions

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

Term	Definition
	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
ppq	parts per quadrillion, or picograms per liter
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 along with the sample date.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-4	60	60	1	1		No	By-product of drinking water chlorination

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
TTHM (ppb)	D-4	80	0	3.0	3.0		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
ARSENIC (ppb)		10	n/a	2	0 - 2		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.076	0.020 - 0.076		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)		4	4	1.4	0.5 - 1.4		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		0.8500	0.6800 - 0.8500		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
SODIUM (ppm)		n/a	n/a	22.00	14.00 - 22.00		No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.7300	1 of 11 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	0.25	0 of 11 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
GROSS ALPHA, EXCL. R & U (pCi/l)		15	0	11.0	11.0		No	Erosion of natural deposits
RADIUM, (226 + 228) (pCi/l)		5	0	6.0	3.4 - 6.8		No	Erosion of natural deposits
GROSS ALPHA, INCL. R & U (n/a)		n/a	n/a	11.0	11.0		No	Erosion of natural deposits

Health effects for any contaminants with MCL violations/Action Level Exceedances

Contaminant Health Effects

COPPER Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilsons Disease should consult their personal doctor.

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. Bristol Waterworks Village Of 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 or at www.epa.gov/safewater/lead.

Water Production Division
O. Fred Nelson Water Plant
100 51st Place
Kenosha, WI 53140



Roger E. Field, PE
Director of Water Production
(262) 653-4331
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Providing and Protecting Kenosha's Greatest Natural Resource

March 14, 2018

Mr. Randy Kerkman
Bristol Water Utility
P.O. Box 187
Bristol, WI 53104

Dear Randy,

Enclosed, you will find the water quality information for the 2017 Consumer Confidence Report (CCR). The information provided represents the most current test results for the year 2017.

Additional information required for consumer confidence reports:

- Source water: Surface water from Lake Michigan.
- Cryptosporidium monitoring was conducted from October 2015 to September 2017. No oocysts were found in any of the 24 samples.

Be advised that the Microbiological Results and Disinfection Results sections of this report are for the Kenosha Water Utility Distribution System; your results will vary. If you have any questions or need additional information, please contact me at the number above.

Sincerely,

A handwritten signature in black ink, appearing to read 'RE Field', is written over a horizontal line.

Roger E. Field, PE
Director of Water Production
Kenosha Water Utility

Kenosha Water Utility

2017 Drinking Water Quality Report

(CCR Data for Wholesale Customers)

Substance (Units)	MCL or (MRDL)	MCLG or (MRDLG)	Level Found	Range/Comments	Year Test	Violation	Typical Source of Contaminant
Microbiological Results †							
Total Coliform Bacteria (% positive)	< 5% of monthly samples	0	0%	0%	2017	No	Naturally present in the environment; E.coli is a type of coliform that is present in human and animal waste.
Cryptosporidium	TT	0	0	0	2015-17	No	Microbial parasite found in surface water, present in human and animal waste.
Disinfection Results †							
Total Chlorine* (ppm)	{ 4 }	{ 4 }	1.25	1.12 - 1.35	2017	No	Drinking water disinfectant
Free Chlorine* (ppm)	{ 4 }	{ 4 }	1.09	0.93 - 1.31	2017	No	Drinking water disinfectant
Haloacetic Acids (ppb)	60	0	15.6	9.3 - 23.6	2017	No	By-product of drinking water chlorination
Total Trihalomethanes (ppb)	80	0	33.9(avg)	17.2 - 60.6	2017	No	By-product of drinking water chlorination
Bromodichloromethane (ppb)	80	0	11.3(avg)	6.3 - 17.0	2017	No	By-product of drinking water chlorination
Bromoform (ppb)	80	0	0.39(avg)	N.D. - 0.58	2017	No	By-product of drinking water chlorination
Chloroform (ppb)	80	0	17.5(avg)	7.7 - 38.0	2017	No	By-product of drinking water chlorination
Dibromochloromethane (ppb)	80	0	4.90(avg)	3.1 - 7.1	2017	No	By-product of drinking water chlorination
† - Microbiological and Disinfection Results are for KWU's distribution system, provided as an informational item. These results are not applicable to other distribution systems.							
* - On September 8, 2017, KWU began testing for free chlorine. Total chlorine is no longer being reported.							
Regulated Inorganic Results							
Antimony (ppb)	6	6	0.21	0.21	2017	No	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder
Arsenic (ppb)	10	0	0.66	0.66	2017	No	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.021	0.021	2017	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	4	4	ND	ND	2017	No	Discharge from metal refineries and coal burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	ND	ND	2017	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	100	100	ND	ND	2017	No	Erosion of natural deposits, Discharge from steel and pulp mills
Copper (ppm)	1.3 (AL)	1.3	0.11 (90th percentile)	0.003 - 0.240	2017	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide (ppb)	200	200	ND	ND	2017	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	4	4	0.73 (avg)	0.63 - 0.85	2017	No	Erosion of natural deposits; water additive that promotes strong teeth;
Lead (ppb)	15 (AL)	0	8.90 (90th percentile)	ND - 24.0	2017	No	Corrosion of household plumbing systems; erosion of natural deposits
Mercury (ppb)	2	2	ND	ND	2017	No	Erosion of natural deposits; Discharge from Refineries and factories ; runoff from landfills and croplands
Nickel (ppb)	100	N/A	0.9	0.9	2017	No	Occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products
Nitrate as N (ppm)	10	10	0.45	0.45	2017	No	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Selenium (ppb)	50	50	ND	ND	2017	No	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N/A	N/A	13	13	2017	No	N/A
Thallium (ppb)	2	0.5	ND	ND	2017	No	Erosion of natural deposits; Leaching from ore processing sites

Kenosha Water Utility

2017 Drinking Water Quality Report

(CCR Data for Wholesale Customers)

Substance (Units)	MCL or {MRDL}	MCLG or {MRDLG}	Level Found	Range/ Comments	Year Tested	Violation	Typical Source of Contaminant
Radioactive result							
Radium (226+228) (pCi/L)	5	0	1.5	1.5	2014	No	Erosion of natural deposits
Unregulated Contaminant Monitoring Program							
Chromium 6 (ppb)	N/A	N/A	0.247	0.190 - 0.247	2013	N/A	Naturally occurring element; used in making steel and other alloys.
Chromium Total (ppb)	N/A	N/A	1.220	0.241 - 1.220	2013	N/A	Naturally occurring element; used in making steel and other alloys. Naturally occurring element found in ores and present in plants, animals and bacteria
Molybdenum (ppb)	N/A	N/A	1.1873	ND - 1.1873	2013	N/A	Naturally occurring element. Has been used in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Strontium (ppb)	N/A	N/A	127.365	117.625 - 127.365	2013	N/A	Naturally occurring elemental metal
Vanadium (ppb)	N/A	N/A	0.318	0.2407 - 0.318	2013	N/A	
Other Monitored Parameters							
Sulfate (ppm)	N/A	N/A	28	28	2017	N/A	N/A
Ortho-phosphate (ppm)	N/A	N/A	0.18	0.13 - 0.26	2017	N/A	Water additive to reduce corrosion of household plumbing systems
Total Organic Carbon (ppm)	TT	N/A	1.21	0.80 - 1.9	2017	N/A	N/A
Turbidity (NTU)	< 0.30	N/A	0.029 (avg)	0.023 - 0.058	2017	No	Erosion of natural deposits
Alkalinity (ppm)	N/A	N/A	103	96 - 116	2017	N/A	N/A
Conductivity (µS/cm)	N/A	N/A	299	283 - 331	2017	N/A	N/A
Total Hardness (ppm)	N/A	N/A	140	130 - 150	2017	N/A	N/A
Temperature (°F)	N/A	N/A	48.7	33.8 - 71.6	2017	N/A	N/A
pH (pH Units)	N/A	N/A	7.59 (avg)	7.22 - 7.84	2017	N/A	N/A

AL: Action Level The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. Action levels are reported at the 90th percentile from homes at greatest risk.

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.

{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 contamination.

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

DEFINITIONS

Abbreviations:

avg: average

N/A: Not Applicable

ND: Not Detected

pCi/L: picocuries per liter

NTU: Nephelometric Turbidity Units

ppb: parts per billion (µg/L)

ppm: parts per million (mg/L)

µS/cm: microsiemens per centimeter