Safe Drinking Water Report 2022

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Inside:

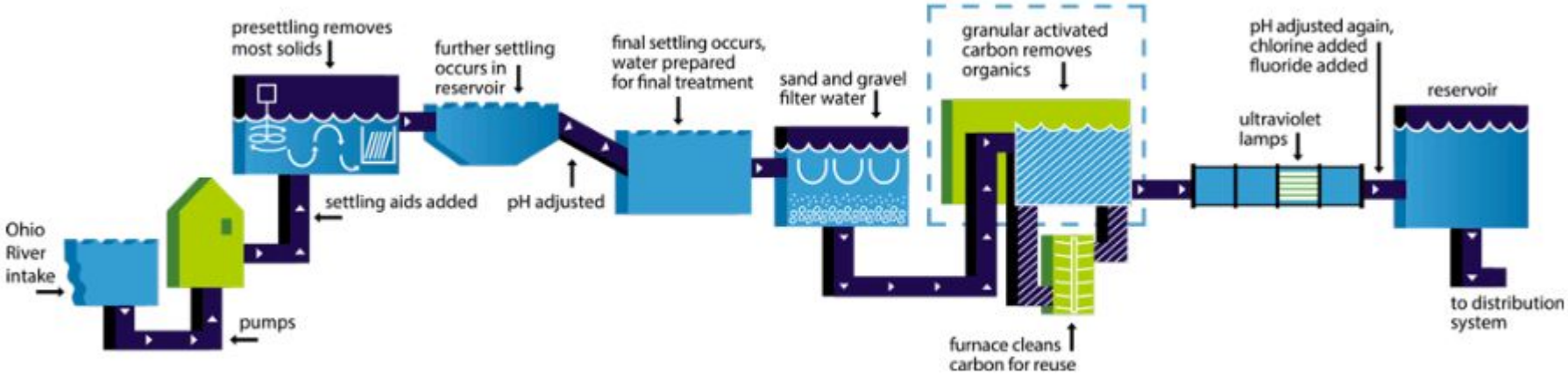
- Details about how your water met all the health and standards for drinking water
- The sources of your drinking water
- Treatment processes that ensure the highest quality

www.readingohio.org

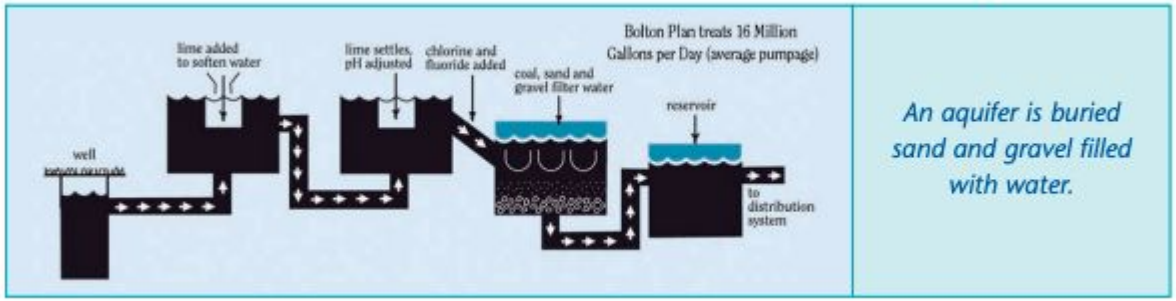
Our Treatment Processes

Greater Cincinnati Water Works is proud to present the 2022 Safe Drinking Water Report. This report shows that in 2022 GCWW met or exceeded all state and federal health standards for drinking water, as it always has.
Before the water comes to your tap, GCWW takes many steps to ensure its quality and safety. Our priority is safe drinking water. On average, we perform 600 tests a day throughout the treatment process and distribution system to ensure you receive the highest quality water possible.

The Treatment Process at the Miller Plant on the Ohio River



The Treatment Process at the Bolton Plant on the Great Miami Aquifer



A Leader in Water Quality Technology

GCWW's Miller Treatment Plant is one of the only few water treatment plants in the nation that incorporates granular activated carbon (GAC) with on-site reactivation into its water treatment process.
This state of the art technology uses granular carbon which contains numerous microscopic cavities. When water is passed through the GAC, impurities adhere to the carbon and are removed from the water. Benefits of GAC are: barrier against potential chemical spills in the Ohio River, barrier against impurities in raw source water, less chlorine required for disinfection, reduced disinfection byproducts, and improved control of taste and odor.

Where Does My Drinking Water Come From?

The City of Reading purchases treated water from Greater Cincinnati Water Works and distributed to the city's customers. GCWW supplies water from two sources:

- The Miller Treatment Plant treats surface water from the Ohio River. This plant supplies 88% of drinking water to GCWW's customers.
- The Bolton Treatment Plant treats groundwater from ten wells in the Great Miami Aquifer and is located in the southern part of Butler County. The plant supplies about 12% of drinking water to GCWW's customers.

Water from the Miller and Bolton Treatment Plants is delivered to customers in an open distribution system, which means it is mixed in the water mains. The border on the map is the dividing line under most typical operating conditions, although water from either plant may go miles beyond this border

Water - A Precious Resource

The first step in providing a plentiful supply of the highest quality drinking water is source water protection.

OHIO RIVER

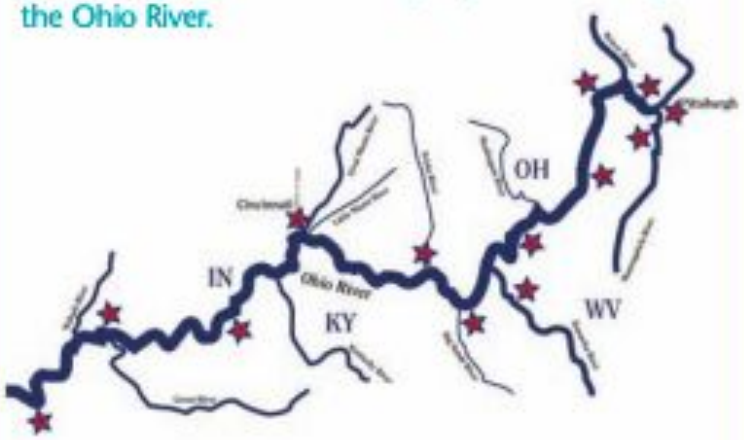
Ohio River Most of GCWW's customers receive water from the Miller Treatment Plant (see map at right), which treats water from the Ohio River. As with all surface waters, Ohio Environmental Protection Agency (OEPA) has classified the Ohio River as highly susceptible to contamination. This is because it is open to the environment and pollution may spread quickly with the flow of the river. To address this, GCWW has several barriers between potential pollution and your tap water. The first barrier, a source water protection program, is designed to prevent and monitor contamination in the river. GCWW works with ORSANCO and other utilities to monitor contamination in the river (see box at left). GCWW has several options to protect the drinking water, ranging from turning off the intake and using only stored water until pollution passes, to altering a treatment process to remove the contamination. Finally, GCWW is one of only a few water treatment plants in the nation that has included granular activated carbon (GAC) into our daily treatment process. GAC has been recognized as the best available technology for removing the most common chemicals found in spills on the Ohio River.

GREAT MIAMI

Aquifer GCWW's Bolton Plant treats groundwater from the Great Miami Aquifer and provides water to the northwestern area of Hamilton County and parts of Warren and Butler Counties. Ohio EPA has classified Bolton water as having a high susceptibility to contamination because the Great Miami Aquifer does not have a protective clay layer, the water is shallow, there are potential contaminant sources nearby, and there are low levels of nitrates in the aquifer. This does not mean that the aquifer is contaminated, only that it is vulnerable to contamination. Cincinnati recognized the vulnerability of the aquifer over a decade ago and has worked hard as a member of the Hamilton to New Baltimore Groundwater Consortium to develop an award-winning source water protection program (www.gwconsortium.org) to protect the aquifer. For more information about source water protection or to find out what you can do to help, cal

Source Water Monitoring

GCWW is served by a coordinated early warning organic detection system — the first such system in the United States. The system warns treatment plants downstream about spills so that measures can be taken before the spill reaches the suppliers' intakes. Water utilities along the Ohio River developed the system in conjunction with ORSANCO (Ohio River Valley Water Sanitation Commission). Thirteen monitoring stations are strategically located along the Ohio River.



ORSANCO Monitoring Stations Along the Ohio River

(Ohio River Valley Water Sanitation Commission — http://www.orsanco.org)

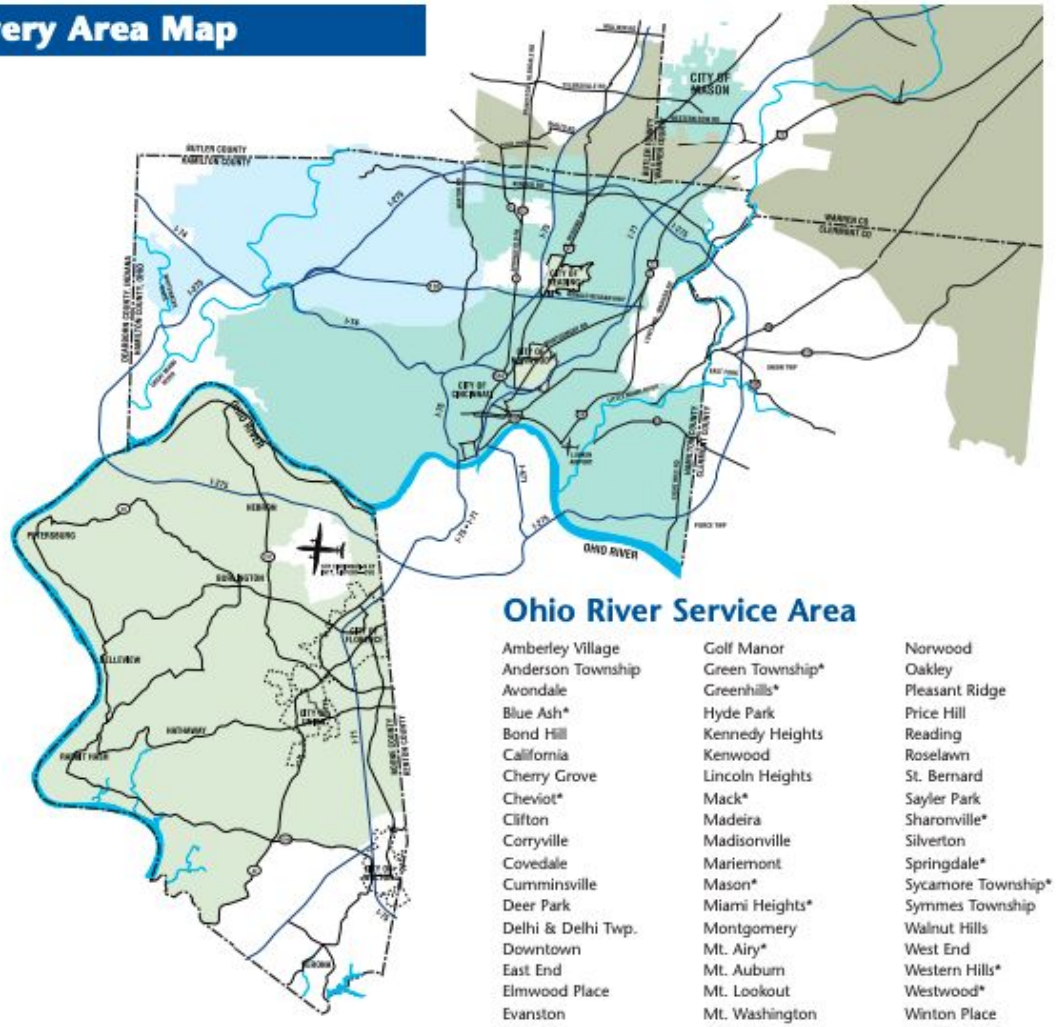
Greater Cincinnati Water Works (GCWW) provides a plentiful supply of the highest quality drinking water to more than 1.1 million people in parts of Hamilton, Butler, Warren, and Clermont counties in Ohio and Boone County, Kentucky.

Where your water comes from

GCWW supplies water from two sources: Ohio River and the Great Miami Aquifer. Surface water from the Ohio is treated at the Miller Treatment Plant. This plant is located on the east side of Hamilton County, supplies about 88% of drinking water to GCWW's customers.

The Bolton Treatment Plant treats ground water from thirteen wells in the Great Miami Aquifer. It is located in the southern part of Butler County and supplies about 12% of drinking water to GCWW customers.

Delivery Area Map



Ohio River Service Area

Amberley Village
Anderson Township
Avondale
Blue Ash*
Bond Hill
California
Cherry Grove
Cheviot*
Clifton
Corryville
Covedale
Cumminsville
Deer Park
Delhi & Delhi Twp.
Downtown
East End
Elmwood Place
Evanston
Evendale
Golf Manor
Green Township*
Greenhills*
Hyde Park
Kennedy Heights
Kenwood
Lincoln Heights
Mack*
Madeira
Madisonville
Mariemont
Mason*
Miami Heights*
Montgomery
Mt. Airy*
Mt. Auburn
Mt. Lookout
Mt. Washington
Newtown
Norwood
Oakley
Pleasant Ridge
Price Hill
Reading
Roselawn
St. Bernard
Sayler Park
Sharonville*
Silverton
Springdale*
Sycamore Township*
Symmes Township
Walnut Hills
West End
Western Hills*
Westwood*
Winton Place
Woodlawn

Reading Water Meets All Health Standards

The City of Reading purchases treated water from Greater Cincinnati Water Works. Greater Cincinnati Water Works continues to bring you a plentiful supply of the highest quality water. In fact, you'll be happy to know that your drinking water has always met or exceeded all of the state and federal health standards for drinking water. GCWW uses state-of-the-art treatment techniques to remove contaminants from the water and continuously monitors water quality throughout the system.

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 Federal Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which shall provide the same protection for public health.

The following tables show the substances detected in GCWW drinking water while performing the most up-to-date monitoring required by the EPA. The substances found were present in quantities less than the EPA limits for safe drinking water. GCWW tests for many more substances that consistently meet all state and federal health standards for drinking water. If you would like a complete listing of GCWW test results, call (513) 591-7700

How Hard is Reading Water?
What is Hard Water?

Hard water is created by Calcium and Magnesium salts which are minerals in water. . Ground water tends to contain more of these minerals than surface water because they are present in the rocks and aquifer. Miller Plant water has an average hardness of 124 milligrams per liter or 7 grains per gallon. Bolton Plant water has an average hardness of 130 milligrams per liter or 8 grains per gallon.

Removal of Hard Water

These minerals may accumulate in dishes like coffee pots, shower heards and faucet aerators. To remove hard water stains the use of Vinegar will work. Fill a coffee pot with vinegar and let it sit overnight. Then rinse the coffee pot throughout before using. Vinegar can also be used for clogged shower heads and faucet aerators.

Facts and Questions

My water tastes and smells like Sulfur.

The most likely cause of a sulfur or rotten egg like odor is from either the water trap below the sink or the faucet itself. The best way to test this theory is to fill a glass of water at the sink, then smelling it in a different room. If the smell disappears, the problem is most likely the sink. Pouring ¼ cup of bleach down the drain and allowing it to sit overnight should help.

My toilet/fixtures has pink or dark stains in them.

Airborne organisms are usually the cause. You will see grey, black, or sometimes pink film on surfaces that are regularly moist, including toilet bowls, showerheards, sink drains, dishwashers, and shower tiles. These organisms are controlled with normal drinking water disinfectants and, therefore, are not found in the water but rather from dust or dirt that is airborne. Regular cleaning and ventilation should reduce these nuisance organism.

Sometimes my water is reddish-brown.

The reddish-brown color can be caused by rust from corrosion in GCWW's pipes, the pipes in your home or from corrosion in your home's water heater. If you have rusty water, try running cold water for several minutes.

Cloudy Water

Have you ever filled up a glass of water and it looks cloudy or milky? Then a few seconds later it clears up! The couldiness might be caused by water in the pipes being under a bit more pressure than the water in the glass. Once the bubble rise to the top and pop, the water becomes clear.

Cloudy water is harmless and also can occur due to water pressure and temperature.

Regulated Contaminants

Substances subject to a Maximum Contaminant Level (MCL), Action Level (AL) or Treatment Technique (TT)*. These standards protect drinking water by limiting the amount of certain substances that can adversely affect public health and are known or anticipated to occur in public water systems.

TABLE A: Regulated Contaminants				Miller Water (from the Ohio River)				Bolton Water (from the Great Miami Valley Buried Aquifer)				Typical Source of Contamination
Substance (Unit)		Maximum Allowed (MCL)	MCLG	Highest Compliance Level Detected	Range of Detection	Violation	Year Sampled	Highest Compliance Level Detected	Range of Detection	Violation	Year Sampled	
Fluoride (ppm)		4.0	4.0	0.87	0.65 - 0.98	No	2022	0.86	0.74 - 0.97	No	2022	Additive which promotes strong teeth. May come from erosion of natural deposits.
Nitrate (ppm)		10	10	0.94	0.64 - 0.94	No	2022	1.79	nd - 1.79	No	2022	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
TTHMs (ppb) [Total Trihalomethanes][1]		80	na	48.0	14.4 - 52.8	No	2022	48.0	14.4 - 52.8	No	2022	Byproduct of drinking water chlorination.
HAA5 (ppb) [Total Haloacetic Acids][1]		60	na	10.8	2.2 - 12.6	No	2022	10.8	2.2 - 12.6	No	2022	Byproduct of drinking water chlorination.
Turbidity (NTU)		TT1 < 1 NTU Max *and* TT2 < 0.3 NTU 95% of the time	na na	0.11 100% < 0.3 NTU	0.03 - 0.11	No	2022	nr	nr	No	na	Soil runoff.
1st Compliance Period (Jan - June)	Lead[1] (ppb)	AL = 15 (the 90th percentile must be less than 15 ppb)	0	90th percentile 4.00 ppb	nd - 38	No	2022	90th percentile 4.00 ppb	nd - 38	No	2022	May come from erosion of natural deposits. There is no detectable lead in our water as it leaves the treatment plants. However, corrosion of household plumbing is a source of lead and copper contamination. GCWW tests water samples collected at customers taps, as required by the Safe Drinking Water Act to ensure safe water.
				(2 of 111 samples tested during the first compliance period were > the AL)[4]				(2 of 111 samples tested during the first compliance period were > the AL)[4]				
	Copper[1] (ppm)	AL = 1.3 (the 90th percentile must be less than 1.3 ppm)	1.3	90th percentile 0.025 ppm	nd - 0.108	No	2022	90th percentile 0.025 ppm	nd - 0.108	No	2022	
				(0 of 111 samples tested during the first compliance period were > the AL)				(0 of 111 samples tested during the first compliance period were > the AL)				
2nd Compliance Period (July - Dec)	Lead[1] (ppb)	AL = 15 (the 90th percentile must be less than 15 ppb)	0	90th percentile 4.67 ppb	nd - 17	No	2022	90th percentile 4.67 ppb	nd - 17	No	2022	
				(1 of 109 samples tested during the second compliance period were > the AL)[4]				(1 of 109 samples tested during the second compliance period were > the AL)[4]				
	Copper[1] (ppm)	AL = 1.3 (the 90th percentile must be less than 1.3 ppm)	1.3	90th percentile 0.018 ppm	nd - 0.056	No	2022	90th percentile 0.018 ppm	nd - 0.056	No	2022	
				(0 of 109 samples tested during the second compliance period were > the AL)				(0 of 109 samples tested during the second compliance period were > the AL)				
Total Organic Carbon[2]		TT	na	1.68	1.60 - 3.49	No	2022	nr	nr	No	na	Naturally present in the environment.
Total Chlorine[1] (ppm)		MRDL = 4.0	MRDLG = 4.0	1.12	1.04 - 1.2	No	2022	1.12	1.04 - 1.2	No	2022	Water additive used to control microbes.
Barium (ppm)		2	2	0.04	na[3]	No	2022	0.014	na[3]	No	2022	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.

Abbreviations

ppb: *parts per billion or micrograms per liter;*
ppm: *parts per million or milligrams per liter;*
nr: *not regulated;*
na: *not applicable;*
NTU: *Nephelometric Turbidity Unit (used to measure clarity in drinking water);*
nd: *not detectable at testing limits;*
TTHMs: *Total Trihalomethanes;*
HAA5: *Haloacetic Acids*

Definitions

Maximum Contaminant Level Goal or MCLG:
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.

Maximum Contaminant Level or MCL:
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.

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

Treatment Technique or TT:
A method for treating water to achieve acceptable levels of the contaminants in lieu of establishing a maximum contaminant level.

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

Maximum Residual Disinfection Level Goal or MRDLG:
The level of 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.

Turbidity:
Utilities who treat surface water are required to report on turbidity as an indication of the effectiveness of the filtration system. Turbidity is a measure of the cloudiness of water. The turbidity limit set by the EPA is 0.3 NTU in 95% of the samples analyzed each month, and shall not exceed 1 NTU at any time. As reported in the table, GCWW's highest turbidity result for 2021 was 0.19 NTU (Miller Water) and lowest monthly percentage of samples meeting the turbidity limits was 100%.

The < symbol:
A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Lead Threshold Level:
The concentration of lead in an individual tap water sample. The lead threshold level is exceeded at 0.015 milligrams per liter (15 ppb) concentration of lead in an individual tap water sample.

TABLE A: Regulated Contaminants			
Substance (Unit)		Maximum Allowed (MCL)	MCLG
Fluoride (ppm)		4	4
Nitrate (ppm)		10	10
TTHMs (ppb) [Trihalomethanes][1]		80	na
HAA5 (ppb) [Haloacetic Acids][1]		60	na
Turbidity (NTU)		TT1 < 1 NTU Max *and* TT2 < 0.3 NTU 95% of the time	na na
1st Compliance Period (Jan - June)	Lead[1] (ppb)	AL = 15 (the 90th percentile must be less than 15 ppb)	0
	Copper[1] (ppm)	AL = 1.3 (the 90th percentile must be less than 1.3 ppm)	1.3
2nd Compliance Period (July - Dec)	Lead[1] (ppb)	AL = 15 (the 90th percentile must be less than 15 ppb)	0
	Copper[1] (ppm)	AL = 1.3 (the 90th percentile must be less than 1.3 ppm)	1.3
Total Organic Carbon[2]		TT	na
Total Chlorine[1] (ppm)		MRDL = 4	MRDLG = 4
Barium (ppm)		2	2
Arsenic (ppb)		10	0

City of Reading Water			
Highest Compliance Level Detected	Range of Detections	Violations	Year Sampled
na	na	na	na
na	na	na	na
32.7	31.8-32.7	No	2022
6.6	6.4-6.6	No	2022
na	na	No	2021
Lead 90th percentile 0	0-20 samples >AL	No	2021
Copper 90th percentile .060 ppm (corrected number)	0-20 samples >AL	No	2021
na	na	No	2021
1.3	0.5-1.3	No	2022
na	na	na	na

		City of Reading Water				
Substance (unit)	MCLG*	Average Level Detected	Range of Detections	Violations	Year Sampled	Byproducts of drinking disinfection, measured at the point of entry to the distribution system.
Chlorate (ppb)	na	29	29	no	2014	
Chromium-6 (ppb)	na	0.04	.033-.046	no	2014	
1,4 Dioxane (ppb)	na	.25	.25	no	2014	
Strontium (ppb)	na	170	160-180	no	2014	

Unregulated Contaminants

Substances for which the EPA requires monitoring to determine where certain substances occur and whether it needs to regulate those substances

		Miller Water				Bolton Water				Reading Water			
Substance (unit)	MCLG*	Average Level Detected	Range of Detection	Violation	Year Sampled	Average Level Detected	Range of Detection	Violation	Year Sampled	Average Level Detected	Range of Detection	Violation	Year Sampled
Chloroform (ppb)[2]	70	9.0	1.2-25.2	na	2022	9.0	1.2-25.2	na	2022	2.4	2.3-2.5	na	2022
Bromodichloromethane (ppb)	0	8.9	3.6-14.3	na	2022	8.9	3.6-14.3	na	2022	7.3	7.0-7.6	na	2022
Dibromochloromethane (ppb)	60	10.1	4.0-17.7	na	2022	10.1	4.0-17.7	na	2022	13.9	13.7-14.0	na	2022
Bromoform (ppb)[2]	0	4.5	nd-19.4	na	2022	4.5	nd-19.4	na	2022	8.7	8.5-8.8	na	2022
Monochloroacetic Acid (ppb)[2]	70	nd	nd-nd	na	2022	nd	nd-nd	na	2022	nd	<2.0	na	2022
Monobromoacetic Acid (ppb)[2]	na	nd	nd-1.7	na	2022	0.3	nd-1.7	na	2022	nd	<1.0	na	2022
Dichloroacetic Acid (ppb)[2]	0	2.1	nd-5.1	na	2022	2.1	nd-5.1	na	2022	nd	nd-nd	na	2022
Trichloroacetic Acid (ppb)[2]	20	.8	nd-3.1	na	2022	.8	nd-3.1	na	2022	0.3	<1.0	na	2022
Dibromoacetic Acid (ppb)[2]	na	3.0	1.5-6.4	na	2022	3.0	1.5-6.4	na	2022	5.0	5.0-5.1	na	2022
Sulfate (ppm)	na	59	43-74	na	2022	42	40-43	na	2022	na	na	na	2022

Your Opinion Counts…..

To participate in water decisions please attend the City of Reading Council meetings held the first and third Tuesday of each month; call City Hall at 733-3725 for more information

How to Contact Us

Water Inquiries	554-1190
Comments on this report	554-1190
Additional Copies	733-3725
Customer Billing	733-3725

Water Emergencies:

Mon.-Fri. 8am - 5pm	733-3725
After 5pm, contact Police	733-4122

This report was prepared to meet the EPA's National Consumer Primary Drinking Water Regulation for Consumer Confidence Reports and available to all Reading Customers. The City of Reading Water Department has a current unconditioned license to operate it's water system.