

CONSUMER CONFIDENCE REPORT for the calendar year 2023



Water Treatment Plant - Front View along Ohio River

Dedicated To Quality Drinking Water

Water Quality Report Created June 1, 2024

Moundsville Water Board
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MOUNDSVILLE WATER BOARD - WV3302611

Consumer Confidence Report – 2024

Covering Calendar Year – 2023

This brochure is a snapshot of the quality of the water that we provided last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. [If you would like to observe the decision-making process that affects drinking water quality or if you have any questions, comments or suggestions, please attend any regularly scheduled Water Board meeting held on the 2nd and 4th Mondays of each month at 5:00pm in the Moundsville City Council Chambers, 800 Sixth Street or call Supt. Terry Roberts at 304-845-3028.](#)

Your water comes from Ground water:

Source Name	Source Water Type
WELL #10	Ground water
WELL #11	Ground water
WELL #12	Ground water
WELL #12A	Ground water
WELL #13	Ground water
WELL #14	Ground water
WELL #15	Ground water
WELL #16	Ground water
WELL #8A	Ground water
WELL #9	Ground water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 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 Safe Drinking Water Hotline (800-426-4791).

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 EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) included 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 sources water **before** we treat it include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock operations and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water 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 storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity.

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

In order to ensure that tap water is safe to drink, EPA prescribes regulation which limits the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Our water system has an estimated population of 9911 and is required to test a minimum of 10 sample(s) per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" is 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.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

Treatment Technique (TT): a required process intended to reduce levels of a contaminant in drinking water.

Maximum Residual Disinfectant Level (MRDL): 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.

Non-Detects (ND): lab analysis indicates that the contaminant is not present.

Parts per Million (ppm): or milligrams per liter (mg/L)

Parts per Billion (ppb): or micrograms per liter (µg/L)

Parts per Trillion (ppt): or nanograms per liter (ng/L)

Picocuries per Liter (pCi/L): a measure of the radioactivity in water.

Millirems per Year (mrem/yr): measure of radiation absorbed by the body.

Monitoring Period Average (MPA): An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly and yearly.

Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

Locational Running Annual Average (LRAA): Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Testing Results for: MOUNDSVILLE

Water Quality Data

The following tables list all of the drinking water contaminants which were detected during the 2023 calendar year. The presence of these contaminants does not necessarily indicate the water poses a health risk. Unless noted, the data presented in this table is from the testing done January 1 - December 31, 2023. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Disinfection Byproducts	Sample Point	Collection Date	Compliance Achieved	Highest Value	Unit	MCL	MCLG	Typical Source
TTHM	MOUNDSVILLE WASTEWATER TP	2023	Yes	4	ppb	80	0	By-product of drinking water chlorination
TTHM	E.FOURTH STREET	2023	Yes	2	ppb	80	0	By-product of drinking water chlorination
HAA5	MOUNDSVILLE WASTEWATER TP	2023	Yes	<0.001	ppb	60	0	By-product of drinking water disinfection
HAA5	E.FOURTH STREET	2023	Yes	<0.001	ppb	60	0	By-product of drinking water disinfection

Regulated Contaminants	Collection Date	Compliance Achieved	Highest Value	Unit	MCL	MCLG	Typical Source
BROMATE	8/10/2023	Yes	<0.001	ppm	10	0	By-product of drinking water chlorination
BROMIDE	7/12/2023	Yes	4.5	ppm	5	5	By-product of drinking water chlorination
FLUORIDE	8/10/2023	Yes	0.87	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE	8/10/2023	Yes	0.5	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NITRITE	8/10/2023	Yes	<0.080	ppm	50	0	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NITRATE-NITRITE	8/10/2023	Yes	0.5	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TRICHLOROETHENE (TCE)	8/10/2023	Yes	<0.001	ppm	5	50	Discharge from metal degreasing sites and other factories

Chlorine/Chloramines - Maximum Disinfection Level	MPA	MPA Units	RAA	RAA Units
10/1/2023 - 10/31/2023	0.60000	MG/L	0.50000	MG/L

Radiological Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
GROSS ALPHA, EXCL. RADON & U	8/4/2022	2.34	NA	pCi/L	15	0	Erosion of natural deposits

Secondary Contaminants-Non Health Based Contaminants-No Federal Maximum Contaminant Level (MCL) Established.	Collection Date	Highest Value	Range (low/high)	Unit	SMCL
SODIUM	8/4/2022	14.5	NA	MG/L	1000

TOTAL COLIFORM RULE						
Substance	Monitoring Period	Compliance Achieved	MCLG	MCL	Highest Percentage	Typical Source
TOTAL COLIFORM	2023	Yes	NA	A	0%	Naturally present in the environment
E.COLI	2023	Yes	0	A	0%	Human and animal fecal waste

Coliform are bacteria that are naturally present in the environment. The results of our monthly testing shows an (A) absence of coliform and E.coli in our water samples.

Lead and Copper	Monitoring Period	90TH Percentile	Range (low/high)	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2020 - 2022	0.235	0.0054 - 0.272	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2020 - 2022	0.00082	0.000076 - 0.0052	ppm	15	0	Corrosion of household plumbing systems; Erosion of natural deposits

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. Your water system 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. 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 <http://www.epa.gov/safewater/lead>.

MOUNDSVILLE WATER BOARD is working towards identifying service line materials throughout the water distribution supply. The service line inventory is required to be submitted to the state by October 16, 2024. If you have any questions about our inventory, please contact the Moundsville Water Board at 304-845-3028.

Unresolved Deficiency Date Identified	Facility	Comments
5/18/2021	WATER SYSTEM	Physical implementation of the cross connection and back flow prevention program has not been addressed. Water unaccountability has seen minor yet positive improvements and will be reduced to a minor deficiency in this report. Please note that these two topics were listed as deficiencies in 2011, 2016 and are listed in this 2021 report

To address this Deficiency, Moundsville Water Board instituted an active Backflow/Cross Connection Prevention Program working in conjunction with AquaBackflow. The Backflow/Cross Connection Prevention Program began March 2023.

During the 2023 calendar year, we had the below noted violation of drinking water regulations.

Compliance Period	Analyte	Comments
10/1/2023 - 10/31/2023	BROMATE	Because the Testing Lab failed to report the October 2023 Bromate sample results to the State, a paperwork violation of 'Failed to monitor/report as required for chlorine or disinfection by-products' was received for the month of October 2023.

- **There are no additional required health effects notices.**
- **There are no additional required health effects violation notices.**

UNREGULATED CONTAMINANT MONITORING RULE – UCMR5

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is necessary. Every five years, the EPA issues a new list of no more than 30 unregulated contaminants to be monitored. The UCMR5 testing was completed in 2023.

EPA's responsibility through the Safe Drinking Water Act is to protect people's drinking water by establishing nationwide, legally enforceable drinking water limits. The result of the UCMR5 testing was to set national standards for several well-researched PFAS chemicals and reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems. As the lead federal agency responsible for protecting America's drinking water, EPA is using the best available science on PFAS to set national standards.

In the final rule on PFAS, which takes effect June 2024, EPA is setting limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA (known as GenX Chemicals). The EPA also set a Hazard Index level for two or more of four PFAS as a mixture: PFNA, PFHxS, HFPO-DA, and PFBS.

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFNA	10 ppt	10 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
Mixture of two or more: PFNA, PFHxS, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

Maximum Contaminant Level Goal (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 and are non-enforceable public health goals.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

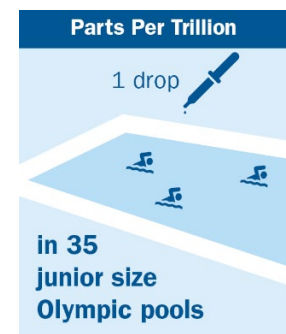
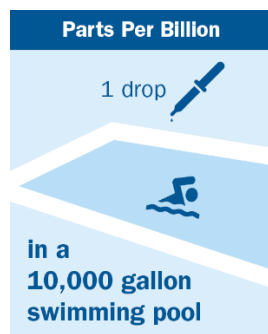
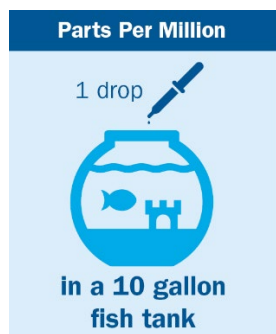
Method Reporting Level (MRL): The lowest level of an analyte (a select chemical) that can be detected in a sample. The minimum concentration that can be reported by a laboratory as a quantitated value for an analyte in a sample following analysis.

Hazard Index (HI): The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.

Parts per Million (ppm): or milligrams per liter (mg/L)

Parts per Billion (ppb): or micrograms per liter (µg/L)

Parts per Trillion (ppt): or nanograms per liter (ng/L)



For more information on the U.S. EPA's PFAS drinking water standards, including the Hazard Index, please visit <https://www.epa.gov/pfas>.

Moundsville Water Board UCMR5 (Unregulated PFAS Chemicals) Results

The table below provides information on the unregulated contaminants that were tested in our water system under the current round of the EPA's unregulated contaminant monitoring in 2023.

Parameter	Year Sampled	Average Amount Detected	U.S. EPA MCL	Hazard Index Calculation	Typical Source
Perfluorooctanoic Acid (PFOA)	2023	1.3	4.0 ppt	N/A	Manufactured chemicals used in household goods for stain, grease, heat and water resistance.
Perfluorooctanesulfonic Acid (PFOS)	2023	1.3	4.0 ppt	N/A	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2023	1.7	10.0 ppt	Hazard Index of 1.0 ppt	
Perfluorohexane Sulfonic Acid (PFHxS)	2023	<1.0	10.0 ppt		
Perfluorononanoic Acid (PFNA)	2023	<1.	10.0 ppt		
Perfluorobutanesulfonic Acid (PFBS)	2023	<1.0	2000 ppt		
Lithium	2023	<3000	9000 ppt	N/A	Naturally occurring with multiple commercial uses

PFAS chemicals are unique, so two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results for another.

Tested for, but Not Detected:

- PFTTrDA
- PFTA
- PFHpS
- PFPeS
- NFDHA
- PFEESA
- PFMBA
- PFPeA
- PFMPA
- 8:2 FTS
- 4:2 FTS
- 6:2 FTS
- 9Cl-PF3ONS
- 11Cl-PF3OUdS
- PFUnA
- PFHxA
- PFDoA
- PFDA
- PFHpA
- NMeFOSAA
- NEtFOSAA
- PFBA
- ADONA

PFAS are not regulated in West Virginia. If you are interested in examining a copy of the Moundsville Water Board's UCMR5 results, please contact the Moundsville Water Board at 304-845-3028.

Your CCR is available at <https://www.cityofmoundsville.com/departments/water-department/31>
Or at https://www.cityofmoundsville.com/docs/v6_WaterBoard2023CCR-WV3302611.pdf

To receive a paper copy in the mail - please contact the Moundsville Water Board by phone at 304-845-0380 or by mail at PO Box 480, Moundsville, WV 26041.

To receive a copy in person – a copy can be picked up at the Moundsville Water Board Billing Office located in the Moundsville City Building, 800 Sixth Street, Moundsville, WV 26041.