

Freedom District

2024 Drinking Water

Quality Report



Important Information Concerning Your Drinking Water

The Bureau of Utilities is pleased to present to you the Annual Water Quality Report for 2024. This report is designed to inform you about the water quality and services we deliver to you every day. Maryland Environmental Service (MES), an Agency of the State of Maryland, provides operational support and prepared this report on behalf of Carroll County and the Freedom District water treatment plant.

The Environmental Protection Agency (EPA) regulates Public Water Systems and the contaminants found in water through the implementation of the Safe Drinking Water Act (SDWA). The SDWA sets regulations and guidelines for how public water systems operate and identifies several hundred drinking water contaminants, establishes monitoring frequencies and limitations. The Maryland Department of the Environment (MDE) is responsible for the enforcement of the SDWA and routinely complete Sanitary Surveys as part of their ongoing inspection and monitoring program. Carroll County provides safe dependable operations of the water system and is dedicated to consistently providing high quality drinking water that meets or exceeds the SDWA standards.

If you have any questions about this report or have questions concerning your water utility, please contact Andrew Watcher, Chief Carroll County Bureau of Utilities at 225 North Center Street, Room 218, Westminster, MD 21157, or by phone at 410-386-2164.

Public Meeting Information:

For the opportunity to ask more questions or participate in decisions that may affect your drinking water quality, the Carroll County Commissioners meet regularly and the weekly agenda is available at:

<https://www.carrollcountymd.gov/government/commissioners/board-of-carroll-county-commissioners-weekly->

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How Water is Treated:

Raw water is pumped from Liberty Reservoir via intake lines located in the reservoir which then travels into Freedom District system #1's dissolved air flotation clarifier. A coagulant is added causing small particles and other suspended matter to attach to one another for easy removal. This clarified water enters a channel which feeds the Membrane Ultra filters before entering the clearwell. The water is then chlorinated for disinfection and fluoridated for dental protection. Caustic soda is used to raise pH making the water less aggressive to pipes and fixtures. Plant #1 also has the potential to remove various minerals and organic compounds that are present in the reservoir at various times of the year. A corrosion inhibitor, poly orthophosphate, is added just before the treated water enters the distribution system. In addition to the Freedom District surface water system #1, ground water is supplied from one well in the Boulder Gineiss Wissahickon formation. This well is called the Fairhaven system #2 and its water is chlorinated for disinfection and fluoridated for dental protection before it enters the distribution system.

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 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 (1-800-426-4791)**.

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Definitions:

- ◆ **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.
- ◆ **Maximum Contaminant Level (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** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow
- ◆ **Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water
- ◆ **Turbidity** - Relates to a condition where suspended particles are present in the water. Turbidity measurements are a way to describe the level of “cloudiness” of the water.
- ◆ **pCi/l** - Picocuries per liter. A measure of radiation.
- ◆ **ppb** - parts per billion or micrograms per liter
- ◆ **ppm** - parts per million or milligrams per liter
- ◆ **ppt** - parts per trillion or nanograms per liter
- ◆ **Mrem** - Millirem roentgen equivalent in man. A measure of radiation dose.

Sources of Drinking Water:

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.

The Maryland Department of the Environment has performed an assessment of the source water. A copy of the assessment is available by calling or writing the Bureau of Utilities, Carroll County Government, 225 North Center Street, Room 218, Westminster MD 21157, 410-386-2164.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain compounds 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.

The table on the following page lists all the drinking water contaminants that were detected during the 2024 calendar year. The presence of these compounds in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is from testing done January 1 – December 31, 2024.

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.

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Contaminant	Unit	Meets Primary Standard Yes/ No	State Primary Standard MCL	State Secondary Standard SMCL	Highest Level Detected	Range
Regulated at the Treatment Plant – Freedom District Plant 01						
Nitrate	ppm	Yes	10	10	1.5	0 – 1.5
Typical Source of Contamination: Runoff from fertilizer use and erosion of natural deposits						
Barium	ppb	Yes	2000	2000	19	0 - 19
Typical Source of Contamination: Erosion of natural deposits						
Fluoride	ppm	Yes	4	4	0.79	0.54 – 0.79
Typical Source of Contamination: Erosion of natural deposits						
Turbidity	ntu TT	Yes	0.3	0	0.64	0.05 – 0.64
Typical Source of Contamination: Discharge from metal refineries, erosion of natural deposits. Turbidity cannot exceed 1.0 NTU and must be less than or equal to 0.3 NTU in at least 95% of the measurements.						
Regulated in the Distribution System						
Chlorine	ppm	Yes	4	4	1.21*	1.07 – 1.21
Source: Water additive used to control microbes *Annual Rolling Average						
Total Trihalomethanes (TTHM) (2024 Sampling)	ppb	Yes	80	N/A	74	21.3 – 114.3
Typical Source of Contamination: By-product of drinking water disinfection *Locational Rolling Annual Average						
Haloacetic Acids (HAA5) (2024 Sampling)	ppb	Yes	60	N/A	48	22.0 – 64.6
Typical Source of Contamination: By-product of drinking water disinfection *Locational Rolling Annual Average						
Lead (2023 Testing)	ppb	Yes	15	0	<2.0*	<2.0 – <2.0**
No sites exceeded the lead action level during this monitoring period. *90th percentile						
Copper (2023 Testing)	ppb	Yes	1300	1300	180*	<5.0 – 770**
No sites exceeded the copper action level during this monitoring period. *90th percentile						
**A “<” symbol signifies a ND or non-detect, meaning the result was below the detection limit for testing						
Regulated at the Treatment Plant – Fairhaven Plant 02 *						
*Fairhaven Plant 02 was offline during 2024, results listed are the most recently tested						
Nitrate (2019 Testing)	ppm	Yes	10	10	1.5	1.5 – 1.5
Typical Source of Contamination: Runoff from fertilizer use and erosion of natural deposits						
Barium (2018 Testing)	ppb	Yes	2000	2000	5.6	5.6 – 5.6
Typical Source of Contamination: Erosion of natural deposits						
Fluoride (2018 Testing)	ppm	Yes	4	4	0.74	0.74 – 0.74
Typical Source of Contamination: Erosion of natural deposits						
Arsenic (2018 Testing)	ppb	Yes	10	0	1.1	1.1 – 1.1
Typical Source of Contamination: Erosion of natural deposits						

Total Organic Carbon (TOC)

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements. During 2024 the minimum required TOC removal rate was between 24% to 38%. The average removal rate during 2024 was 31%.

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Lead Prevention:

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. The Freedom District is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Jay Janney at jjanney@menv.com for a list of eligible labs. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

Contaminants That May Be Present in Source Water:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. 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. 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.

Special Points of Interest:

The water at the Freedom District is tested for over 120 different compounds. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some compounds. The presence of these compounds 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 (EPA's) Safe Drinking Water Act Hotline (1-800-426-4791)**.

Service Line Inventory

An initial Service Line Inventory was completed by the Freedom District and submitted to the Maryland Department of the Environment on 10/03/2024. As a result, the Service Line Inventory requirement was fulfilled. A copy of the Service Line Inventory Statement is available upon request by contacting utilitiesadmin@carrollcountymd.gov

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Polyfluoroalkyl Substances

PFAS – short for per- and polyfluoroalkyl substances – refers to a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain- and water-resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging and fire-fighting foams. These uses of PFAS have led to PFAS entering our environment, where they have been measured by several states in soil, surface water, groundwater, and seafood. Some PFAS can last a long time in the environment and in the human body and can accumulate in the food chain.

The Maryland Department of the Environment (MDE) conducted a PFAS monitoring program for Community Water Systems from 2020 to 2022. No PFAS sampling was conducted for the Freedom District System during 2024. The Freedom District is scheduled to be sampled for PFAS in 2025. PFAS results are made available on MDE’s website: <https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx>.

The Environmental Protection Agency (EPA) finalized regulations for 6 PFAS compounds in drinking water in April 2024. The MCLs for PFOA and PFOS are each 4.0 parts per trillion (ppt). The MCLs for PFNA, PFHxS, and HFPO-DA (GenX chemicals) are each 10 ppt. Additionally, a mixture of two or more of the following chemicals (PFNA, PFHxS, HFPO-DA, and PFBS) will be regulated with a Hazard Index of 1 (unitless) to determine if the combined levels of these PFAS pose a risk and require action.

The 5th Unregulated Contaminant Monitoring Rule (UCMR5) began testing for 29 PFAS compounds and lithium in 2023. The UCMR5 should test all community water systems with populations of at least 3300 people. Three randomly selected systems in Maryland with populations less than 3300 people will also be tested under the UCMR5. Detections greater than the minimum reporting levels for each constituent should be reported in the CCR. UCMR5 sampling occurred for the Freedom District in 2024, the results are below.

2024 Freedom District WTP UCMR5 Results				
Contaminant	Average Level	Range Detected	Unit	Typical Source
PFBA	<5	<5	ppt	a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain- and water-resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging and fire-fighting foams.
PFBS	<3	<3	ppt	
PFHpA	<3	<3	ppt	
PFHxA	<3	<3	ppt	
PFHxS	<3	<3	ppt	
PFOA	<4	<4	ppt	
PFOS	<4	<4	ppt	
PFPeA	3.3	3.2 - 3.4	ppt	
6:2 FTS	<5	<5	ppt	
Lithium	<9	<9	ppb	Naturally occurring element