



FREDERICK

MARYLAND

Annual Drinking Water

Public Water System
ID # MD0100015

The City of Frederick is pleased to provide you this updated Drinking Water Quality Report. This consumer confidence report (CCR) is designed to give you annual information about the source and quality of Frederick's tap water.

The drinking water supplied during the past calendar year met or surpassed all of the Environmental Protection Agency (EPA) standards for community drinking water. There were no contaminant level violations.

The City of Frederick's dedicated staff of water service employees continually strives to produce and deliver the highest quality of clean and dependable drinking water for our residents, businesses, and visitors.

The tables provided within this report summarize our monitoring data for the calendar year of 2024. We hope you find this report about your drinking water informative. Please contact us if you should have any questions on this report.



Testing Requirements

The State of Maryland and the EPA require community water suppliers to perform contaminant testing on their drinking waters and to report the results on a regular basis. These regulatory requirements are based upon the current federal *Safe Drinking Water Act* (SDWA) and are designed to ensure the quality of your drinking water. This annual summary is prepared after the end of each calendar year to keep our consumers informed. Once updated, the report gets posted to the City website for viewing, and public notices of availability are made no later than June 30 of each year.

About the Data

Most of the test data shown in the tables is from samples collected during 2024, but some contaminants are not monitored for every year. Any data not from 2024 will be noted. Reported test data is a compilation of all City water sources. Many contaminants were tested for but not detected. These include organic chemicals such as industrial solvents and pesticides; inorganics, such as metals; and radioactive compounds, like radon. If you have any questions about contaminants not listed, or have questions about the City's monitoring program, call 301-600-1473 for technical support.

General Contaminant Information

Although there were detections of some contaminants in City water, all that are regulated were below compliance levels. All drinking water sources are subject to potential contamination by substances that occur naturally or are human-made. As water travels over the surface of the land or through the ground, some of these substances can be picked up and transported with the water. These can be microbes, organic or inorganic chemicals, or radioactive substances. All drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information can be obtained from the Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791), or at the EPA website www.epa.gov/safewater.

Information About Lead In Drinking Water

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 City of Frederick is responsible for limiting lead in drinking water by removing lead pipes and implementing corrosion control techniques. These techniques include pH and alkalinity adjustment via lime addition, as well as a zinc orthophosphate chemical addition to inhibit corrosion. However, the City 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 it tested, contact the City of Frederick at 301-600-1473. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

Precautions For Vulnerable Populations

The City of Frederick reminds those who may have weakened immune systems that any drinking water (tap or bottled) should not be considered sterile. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy, those who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from microbial infections. These individuals should seek advice about drinking water from their healthcare providers. Current guidelines developed by the Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) on ways to lessen the risk of infection from microbial contaminants like *Cryptosporidium* are available by visiting www.epa.gov/safewater.

Source Water Assessments

The Maryland Department of Environment (MDE) has completed source water assessments on the vulnerability of all State water sources to contamination. Contaminants of concern for City sources include natural organic matter (NOM), sediment, herbicides, E.coli bacteria, and cryptosporidium. For more information about the assessment reports, or to obtain copies, you may call the Maryland Department of Environment - Source Protection Division at 410-537-3714 or the technical information number listed under the City contacts section of this report.

City Water Source Info.

During **2024**, The City of Frederick utilized four different water sources to supply our service area. You may have received your drinking water from any one of these sources or a mixture of them depending on your location within our service area. The average daily usage from sources shown was approximately **6.22** million gallons per day. The percent of drinking water supplied by each of these sources is provided in the table to the right.

City Water Source Table

29.4 %	MONOCACY RIVER SOURCE
52.5 %	LINGANORE CREEK SOURCE
13.5 %	FISHING CREEK SOURCE
4.6%	POTOMAC RIVER SOURCE

Definitions of Abbreviations and Terms Used in This Report

In the data tables, you will see terminology and acronyms with which you may not be familiar. To help you understand this information, please note the following definitions:

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety. These goals represent a target level for a contaminant that is not necessarily achievable with current standard treatments.

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water, based on present regulations as set by the EPA. To protect the public health, MCLs are set as close to the MCLGs as feasible, based on the best treatment technology currently available.

AL - Action Level - The concentration of a contaminant, which, if exceeded, triggers special treatment or other requirements to be followed. Action levels function as a type of MCL.

LRAA - Locational Running Annual Average - Applies to disinfection byproducts. Quarterly test results from each distribution sample location are used to calculate a running annual average for compliance at each of our representative City sample sites.

TT - Treatment Technique - A required process intended to reduce the level of a specific contaminant in drinking water produced at each water plant.

NTU - Nephelometric Turbidity Unit - A measure of the cloudiness or clarity of the water.

PPM - Parts Per Million - Unit of measure meaning one part contaminant in one million parts water (equivalent to milligrams per liter).

PPB - Parts Per Billion - Unit of measure meaning one part contaminant in one billion parts water (equivalent to micrograms per liter).

PPT - Parts Per Trillion - Measurement unit meaning one part contaminant in one trillion parts water (equivalent to nanograms per liter).

POE - Point of Entry - Means the location where fully treated water enters the City distribution system.

NA - Not Applicable - Means does not apply to the test data or situation.

ND - Not Detected - at the lowest method detection limit referenced by the testing lab or EPA.

MRDL - Maximum Residual Disinfectant Level - The highest level of disinfectant allowed in drinking water. The City of Frederick currently uses free chlorine to disinfect our drinking water.

Regulated Contaminants - City Water Plants 2024

CCR—PWSID # MD0100015				DATA FROM ALL TREATED POINTS OF ENTRY (POE)		
CONTAMINANT	UNITS	MCLG	MCL	REPORT VALUE ¹	RANGE ²	VIOLATION
FLUORIDE	PPM	4	4	1.2	0.1– 1.2	No
NITRATE	PPM	10	10	1.90	ND - 1.90	No
BARIUM	PPM	2	2	0.045	0.026 - 0.045	No
ETHYLENE DIBROMIDE	PPT	0	50	19	N/A	No
MAXIMUM TURBIDITY	NTU	0.00	1.00	0.34	0.02 - 0.34	No
MONTHLY TURBIDITY (TT)	%	0	5	0.02	N/A	No
% OF VALUES > 0.3						
TOTAL ORGANIC CARBON (TT)	%	N/A	N/A	Met % Removal Requirements	N/A	No
Beta/Photon Emitters (2021)	pCi/L	0	50	7.3	ND - 7.3	No
Gross Alpha excluding Radon and Uranium (2021)	pCi/L	0	15	2.7	ND - 2.7	No
Di(2-ethylhexyl) phthalate	PPB	0	6	1.3	ND - 1.3	No

1. **Report Value** shows the compliance number which was the highest level detected during calendar year 2024.

2. **Range** shows the highest and lowest reported test values when more than one sample was tested during the calendar year.

3. **N/A** in table means not applicable to that contaminant and **ND** in table means Not Detected at minimum detection limits.

4. **POE** in table stands for the initial point of entry of treated drinking water into the City's water distribution piping system.

Regulated Contaminants - City Distribution System 2024

CONTAMINANT	UNITS	MCLG	MCL	REPORT VALUE	RANGE	VIOLATION
COLIFORM BACTERIA	%	0	5	0.0	NA	No
CHLORINE (MRDL)	PPM	4	4	1.33	1.02 - 1.33	No
TOTAL TRIHALOMETHANES (THM) ¹	PPB	NA	80	71	25.3 - 108.1	No
TOTAL HALOACETIC ACIDS (HAA) ¹	PPB	NA	60	54	21.0 - 58.9	No
COPPER ² (AL) 2024 data	PPB	1300	1300	123	<1 - 210	No
LEAD ² (AL) 2024 data	PPB	0	15	1.6	<0.50 - 6.40	No

1. Report values for THM and HAA are the highest Locational Running Annual Averages (LRAA) calculated by MDE for this reporting period. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

2. Testing for Lead and Copper was last performed during 2024. Next testing is currently scheduled to occur during summer of 2027.

3. Lead and Copper values reported represent the 90th percentile values from a total of 37 high risk sites tested. No sites tested above the Lead AL. A service line inventory is being completed and can be found here: <https://www.cityoffrederickmd.gov/DocumentCenter/View/23227/COF-lead-inventory>.

4. Coliform Bacteria report value represents 0 positive out of 865 total compliance samples collected during calendar year 2024.

Regulated Contaminant Source Information

CONTAMINANT	TYPICAL SOURCE OF CONTAMINANT
CHLORINE	Disinfectant additive which controls growth of microbes in water.
FLUORIDE	Additive which promotes strong teeth and reduces incidence of cavities.
ETHYLENE DIBROMIDE	Discharge from petroleum refineries.
BARIUM	Erosion of natural barium deposits in the watershed.
NITRATE	Runoff from fertilizer use; sewage treatment plant discharge; leachate from septic systems; natural deposits within the watershed.
LEAD	Corrosion of plumbing systems that have lead components.
COPPER	Corrosion of plumbing systems that have copper components.
TURBIDITY	Runoff of soil and other particles; Turbidity measurements are used to gauge the effectiveness of our water filtration systems.
TOTAL TRIHALOMETHANES (TTHM)	By-products of drinking water chlorination. TTHM group includes bromoform, bromodichloromethane, chlorodibromomethane, and chloroform.
TOTAL HALOACETIC ACIDS (HAA5)	By-products of drinking water chlorination. Includes mono and dichloro-acetic acid, mono and dibromoacetic acid, trichloroacetic acid.
TOTAL ORGANIC CARBON (TOC)	Natural and manmade sources. Reducing TOC levels prior to addition of disinfectants helps lower the formation of disinfection byproducts.
BETA/PHOTON EMITTERS	Decay of natural and man-made deposits.
GROSS ALPHA (NOT RADON AND URANIUM)	Erosion of natural deposits.
DI(2-ETHYLHEXYL)PHTHALATE	Discharge from rubber and chemical factories.

Unregulated Contaminant Monitoring - 2024

CONTAMINANT	UNITS	MCL	REPORT VALUE	RANGE	VIOLATION	TYPICAL SOURCE
ALUMINUM	PPM	None	0.039	ND - 0.039	NO	Erosion of natural minerals; leaching of metals from contact with drinking water such as pipes and fittings
BROMOMETHANE (2022)	PPB	None	0.61	None	NO	A manmade substance used as a fumigant and pesticide
CALCIUM	PPM	None	47.2	5.9 - 47.2	NO	Erosion of natural minerals
CHLORIDE	PPM	None	43.1	5.1 - 43.1	NO	Erosion of natural minerals
CHLOROMETHANE	PPB	None	2.21	1.03 - 2.21	NO	Naturally present in the environment; Formed by marine phytoplankton and forest fires.
IRON	PPM	None	0.06	ND - 0.06	NO	Erosion of natural minerals; leaching of metals from contact with drinking water such as pipes and fittings
MAGNESIUM	PPM	None	9.0	ND - 9.0	NO	Erosion of natural minerals; leaching of metals from contact with drinking water such as pipes and fittings
MANGANESE	PPM	None	0.013	ND - 0.013	NO	Erosion of natural deposits; leaching of metals from contact with drinking water such as pipes and fittings.
POTASSIUM	PPM	None	3.2	0.7 - 3.2	NO	Erosion of natural minerals
SODIUM	PPM	None	29.1	1.4 - 29.1	NO	Erosion of natural minerals
SULFATE	PPM	None	55.4	2.5- 55.4	NO	Erosion of natural minerals
ZINC	PPM	None	0.1	0.08 - 0.10	NO	Natural and manmade sources
PFOA	PPT	None	2.1	ND - 2.1	NO	See PFAS Notations Below
PFOS	PPT	None	3.2	ND - 3.2	NO	See PFAS Notations Below
PFBS	PPT	None	3.9	ND - 3.9	NO	See PFAS Notations Below
PFHxS	PPT	None	1.6	ND - 1.60	NO	See PFAS Notations Below
PFNA	PPT	None	ND	None	NO	See PFAS Notations Below
HFPO-DA (GenX)	PPT	None	ND	None	NO	See PFAS Notations Below
PFPeA	PPT	None	3.1	ND - 3.1	NO	See PFAS Notations Below

- PFAS or (per and polyfluoroalkyl substances) refers to a large group of over 4000 human-made chemicals that have been used since the 1940's in a range of products, including stain and water resistant fabrics, 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 Environmental Protection Agency (EPA) finalized regulations for 6 PFAS compounds in drinking water in April 2024. The MCLs for PFOA and PFOS are 4.0 parts per trillion (ppt). The MCLs for HFPO-DA (GenX), PFNA, and PFHxS are 10 ppt. PFAS mixtures containing at least two or more of PFNA, PFHxS, HFPO-DA (GenX), and PFBS use a Hazard Index of 1.0 (unitless) to determine if the combined levels of these 4 PFAS pose a risk and require action. Public water systems have four years (by 2029) to be in compliance with these MCLs and to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs.
- In 2024 the City of Frederick conducted testing under the 5th Unregulated Contaminant Monitoring Rule (UCMR5) which includes monitoring for 29 PFAS compounds and lithium. The complete data set of results can be found here: <https://www.cityoffrederickmd.gov/WaterQualityData>.
- The Maryland Department of the Environment (MDE) conducted a PFAS monitoring program for community water systems in 2020-2022. You can view those results at: <https://mde.maryland.gov/publichealth/pages/PFAS-landing-page.aspx>.



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MARYLAND

The City of Frederick

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Council Members

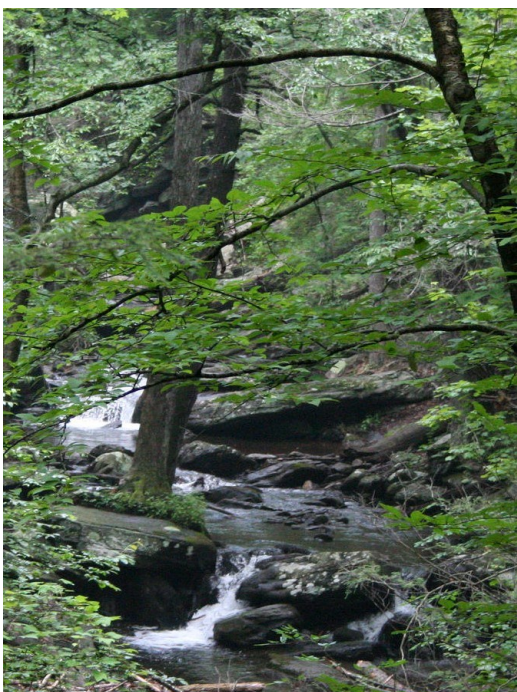
Katie Nash | President

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Donna Kuzemchak

Ben MacShane

Kelly Russell



PWSID NO.—MD0100015

2024 Annual Drinking Water Quality Report

Public Involvement Opportunities

The public is encouraged and invited to participate and provide input on drinking water or other issues. Information on Mayor and City Council Public Meetings can be obtained by calling the City public information phone line at 301-600-1380 or online at cityoffrederickmd.gov.

City Water Report Contacts

To request a paper copy of this report or for general information, call 301-600-1681.

For technical information on contaminant testing or results, call 301-600-1473.

For information on our water treatment plants or processes, call 301-600-1186.

View this report at cityoffrederickmd.gov/ccr

Un mensaje para nuestros clientes de habla español

Este informe contiene información importante sobre su agua potable. Favor busque a alguien que pueda traducirlo para usted o explicar su contenido, ya que es algo muy importante.