



May 24, 2024

Tranquillity will supplement chlorine to the water that is provided by the City of Frederick, MD with a Miox on site Generation System that will keep the chlorine level above 1.0 ppm. If any questions, you may contact Jason Phillip of U.S. Water Services at 703-258-5562 or the Maintenance Department at Tranquillity 301-668-6030.

Respectfully,

A handwritten signature in black ink, appearing to read "Charles Holden". The signature is fluid and cursive, with a prominent loop at the end.

Charles Holden

Maintenance Director

**Regulated Contaminants**

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Haloacetic Acids (HAA5)</b>	2023	31	17.3 - 43.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
<b>Total Trihalomethanes (TTHM)</b>	2023	52	52.1 - 52.1	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

**Violations Table**

<b>Haloacetic Acids (HAA5)</b>			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MONITORING, ROUTINE (DBP), MAJOR	07/01/2023	09/30/2023	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

<b>Total Trihalomethanes (TTHM)</b>			
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.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MONITORING, ROUTINE (DBP), MAJOR	07/01/2023	09/30/2023	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.



# Annual Drinking Water Quality Report

**FREDERICK**  
MARYLAND

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 2023. 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 2023, but some contaminants are not monitored for every year. Any data not from 2023 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.

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### **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](http://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 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 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 <http://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](http://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 **2023**, 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 **6.33** 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

26.9 %	MONOCACY RIVER SOURCE
45.1 %	LINGANORE CREEK SOURCE
8.5 %	FISHING CREEK SOURCE
19.5%	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 2023

CCR—PWSID # MD0100015				DATA FROM ALL TREATED POINTS OF ENTRY (POE)		
CONTAMINANT	UNITS	MCLG	MCL	REPORT VALUE <sup>1</sup>	RANGE <sup>2</sup>	VIOLATION
FLUORIDE	PPM	4	4	1.1	0.4- 1.1	No
NITRATE	PPM	10	10	2.3	ND - 2.3	No
BARIUM	PPM	2	2	0.035	ND - 0.035	No
ATRAZINE	PPB	3	3	0.24	ND - 0.24	No
MAXIMUM TURBIDITY (TT)	NTU	0.00	1.00	0.87	0.02 - 0.87	No
MONTHLY TURBIDITY (TT)	%	0	5	0.08	N/A	No
% OF VALUES > 0.3 NTU						
TOTAL ORGANIC CARBON (TT)	%	N/A	N/A	Met % Removal Requirements	N/A	No

1. **Report Value** shows the compliance number which was the highest level detected during calendar year 2023.
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 2023

CONTAMINANT	UNITS	MCLG	MCL	REPORT VALUE	RANGE	VIOLATION
COLIFORM BACTERIA	%	0	5	0.0	NA	No
CHLORINE (MRDL)	PPM	4	4	1.3	1.0 - 1.3	No
TOTAL TRIHALOMETHANES (THM) <sup>1</sup>	PPB	NA	80	69	18.9- 105.9	No
TOTAL HALOACETIC ACIDS (HAA) <sup>1</sup>	PPB	NA	60	54	16.8 - 74.9	No
COPPER <sup>2</sup> (AL) 2021 data	PPB	1300	1300	110	3.6 - 160	No
LEAD <sup>2</sup> (AL) 2021 data	PPB	0	15	1.1	< 1.0 - 1.7	No

1. Report values for THM and HAA are the highest Locational Running Annual Averages (LRAA) calculated by MDE for this reporting period.
2. Testing for Lead and Copper was last performed during 2021. Next testing is currently scheduled to occur during summer of 2024.
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.
4. Coliform Bacteria report value represents 0 positive out of 864 total compliance samples collected during calendar year 2023.

## Regulated Contaminant Source Information

CONTAMINANT	TYPICAL SOURCE OF CONTAMINANT
<b>BARIUM</b>	Erosion of natural barium deposits in the watershed.
<b>CHLORINE</b>	Disinfectant additive which controls growth of microbes in water.
<b>FLUORIDE</b>	Additive which promotes strong teeth and reduces incidence of cavities.
<b>NITRATE</b>	Runoff from fertilizer use; sewage treatment plant discharge; leachate from septic systems; natural deposits within the watershed.
<b>LEAD</b>	Corrosion of plumbing systems that have lead components.
<b>COPPER</b>	Corrosion of plumbing systems that have copper components.
<b>ATRAZINE</b>	Runoff following the use of this herbicide in the watershed.
<b>TURBIDITY</b>	Runoff of soil and other particles; Turbidity measurements are used to gauge the effectiveness of our water filtration systems.
<b>TOTAL TRIHALOMETHANES (TTHM)</b>	By-products of drinking water chlorination. TTHM group includes bromoform, bromodichloromethane, chlorodibromomethane, and chloroform.
<b>TOTAL HALOACETIC ACIDS (HAAS)</b>	By-products of drinking water chlorination. Includes mono and dichloro-acetic acid, mono and dibromoacetic acid, trichloroacetic acid.
<b>TOTAL ORGANIC CARBON (TOC)</b>	Natural and manmade sources. Reducing TOC levels prior to addition of disinfectants helps lower the formation of disinfection byproducts.

## Unregulated Contaminant Monitoring - 2023

CONTAMINANT	UNITS	MCL	REPORT VALUE	RANGE	VIOLATION	TYPICAL SOURCE
<b>CHLORIDE</b>	PPM	None	<b>41.3</b>	4.9 - 41.3	NO	Erosion of natural minerals
<b>SODIUM</b>	PPM	None	<b>21.1</b>	1.4 -21.1	NO	Erosion of natural minerals
<b>SULFATE</b>	PPM	None	<b>38.8</b>	2.7- 38.8	NO	Erosion of natural minerals
<b>PFOA</b>	PPT	None	<b>ND</b>	None	NO	See PFAS Notations Below
<b>PFOS</b>	PPT	None	<b>2.6</b>	ND - 2.6	NO	See PFAS Notations Below
<b>PFBS</b>	PPT	None	<b>2.4</b>	ND - 2.4	NO	See PFAS Notations Below
<b>PFHxS</b>	PPT	None	<b>ND</b>	None	NO	See PFAS Notations Below
<b>PFNA</b>	PPT	None	<b>ND</b>	None	NO	See PFAS Notations Below
<b>HFPO-DA (GenX)</b>	PPT	None	<b>ND</b>	None	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) proposed regulations for 6 PFAS compounds in drinking water in March 2023. The MCLs for PFOA and PFOS are proposed to be 4.0 parts per trillion (ppt). For PFBS, PFNA, PFHxS, and HFPO-DA (GenX) a Hazard Index of 1.0 (unitless) is proposed to determine if the combined levels of these 4 PFAS pose a risk and require action.
- 2023 Test results for the six PFAS compounds proposed for future regulation are shown in the "unregulated" table above.
- In 2024 the City of Frederick will be conducting testing under the 5th Unregulated Contaminant Monitoring Rule (UCMR5) which includes monitoring for 29 PFAS compounds and lithium. The results of that testing will be available once received.
- The Maryland Department of the Environment (MDE) conducted a PFAS monitoring program for community water systems from 2020-2022. You can view those results at: <https://mde.maryland.gov/publichealth/pages/PFAS-landing-page.aspx>





# FREDERICK

MARYLAND

**The City of Frederick**  
101 North Court St  
Frederick, MD 21701  
[cityoffrederickmd.gov](http://cityoffrederickmd.gov)

**Mayor** | Michael C. O'Connor

### **Aldermen**

*Katie Nash* | President Pro Tem

*Donna Kuzemchak*

*Ben MacShane*

*Kelly Russell*

*Derek T. Shackelford*



**PWSID NO.—MD0100015**

## **2023 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 Board of Aldermen Public Meetings can be obtained by calling the City public information phone line at 301-600-1380 or online at [cityoffrederickmd.gov](http://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](http://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.