

FREDERICK COUNTY DIVISION OF WATER AND SEWER UTILITIES

Water Quality Report

2022 Annual Summary Prepared for Customers of Frederick County Water Systems



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Water Quality Data Summary

The Frederick County Division of Water and Sewer Utilities is pleased to present this year's Annual Water Quality Report. Once a year, we present this report to our customers to demonstrate that our drinking water meets or surpasses all State and Federal drinking water standards. This report includes data collected during calendar year 2022 and contains valuable information that we hope you will find interesting and helpful. We want you to understand the efforts and dedication of our employees who work around the clock to provide the reliable and high quality drinking water that our customers have come to expect.

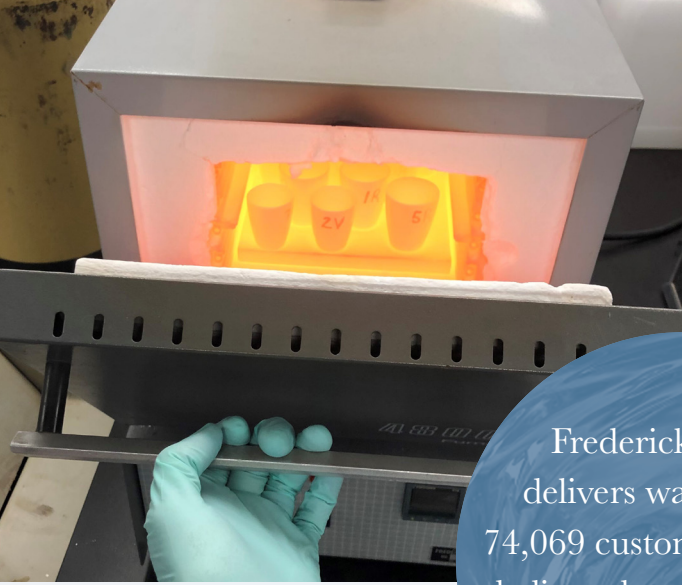
Sources of Water

Sources of drinking water, both tap and bottled, include rivers, streams, ponds, reservoirs, springs, and wells. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. The majority of the County's water system customers receive treated water from surface water supplies, primarily the Potomac River. The remainder of our customers receive treated ground water from deep well sources.

Source of Water Protection

The Maryland Department of the Environment has completed source-water assessments for each of the County's water supplies. These assessments are used to implement source-water protection plans, which identify and prevent potential sources of contamination from entering your drinking water supply. More information on these assessments can be found on-line at www.frederickcountymd.gov/1284/water-purification-distribution or by contacting our offices at (301) 600-1825.

In 2022, Frederick County produced a total of 2.47 billion gallons of water at 10 treatment plants. Most (93%) was produced at the New Design Road Water Treatment Plant which uses the Potomac River as its source of water. The remainder was produced at numerous treatment plants using groundwater sources.



Frederick County delivers water to over 74,069 customers with our dedicated staff serving you 24 hours a day, seven days a week.

This detailed report contains specific information about your water quality and what the analyses mean. In addition to the test results shown on the enclosed data table, testing has been performed on well over 100 various regulated and unregulated contaminants. These contaminants, which include volatile and synthetic organic chemicals (industrial chemicals and herbicides/pesticides), metals, other inorganic, and radiological compounds are not listed because they were not detected. Specific information on this additional testing may be obtained by contacting the Frederick County Division of Water and Sewer Utilities.

If you have any questions about this report or concerns about your water quality, please contact Joshua Smith, Regulatory Compliance Department Head, at (301) 600-2581, Monday through Friday, between the hours of 7:30 a.m. and 4:30 p.m.

We want our valued customers to be informed about their water utility. Periodically, legislative issues pertaining to your water system may be addressed at regularly scheduled County Council meetings. Meeting schedules with agendas and other pertinent information concerning your water system can be found online at the Frederick County Government website:

www.FrederickCountyMD.gov
Please e-mail your questions to:
wsops@FrederickCountyMD.gov

Testing Requirements

The Frederick County Division of Water and Sewer Utilities and the Maryland Department of the Environment routinely monitor the constituents in your drinking water according to Federal and State laws. This report summarizes the results of our monitoring for the period of January 1, 2022 to December 31, 2022. Some parameters are not monitored each year and will be noted as such in the data table.

Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as individuals 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 from their health care providers about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline. Call (800) 426-4791.

Specific Water Quality Data

The data table that accompanies this pamphlet provides specific water quality information regarding your water supply. It also includes other information that is related to the operation of your community's water supply system. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old.





Customers With Multiple Water Sources

Some of our water system customers receive water from multiple sources of supply. This typically occurs when water systems located next to each other share water between their respective distribution systems. Because the flow and movement of water in the distribution system can be non-uniform, it is difficult to accurately identify the proportion of water that comes from each water system.

If your community is supplied by multiple sources of water, you may find data from more than one water source in this report. Your specific water quality can be a combination of the multiple sources. Regardless of how many sources of water the water system uses, each source met or exceeded the standards set by the EPA.

Compliance with Safe Drinking Water Act Requirements

Last year, as in years past, your tap water was regularly tested to determine if it met EPA and State drinking water health standards. Frederick County vigilantly safeguards its water supply by monitoring both source water and treated water. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals, or radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

To establish a Maximum Contaminant Level (MCL) for a contaminant, EPA first determines how much of a contaminant may be present with no adverse health effects. This establishes what is called the Maximum Contaminant Level Goal (MCLG), which is a non-enforceable public health goal. The legally enforced MCL may be higher than the MCLG because of analytical limitations measuring small quantities of contaminant, a lack of treatment technologies, or if EPA determines that the cost of treatment outweighs the public health benefit of the lower MCL.

Terms, Units & Abbreviations

PPM - Parts per Million - Analogous to one penny in \$10,000.

PPB - Parts per Billion - Analogous to one penny in \$10,000,000.

PPT - Parts per Trillion - Analogous to one penny in \$10,000,000,000.

pCi/L - Picocuries per Liter - A measure of radiation.

TT - Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

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

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

SDWA - Safe Drinking Water Act - Federal Law which regulates the water quality for public water supplies.

MCLG - Maximum Contaminant Level Goal - 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.

MCL - Maximum Contaminant Level - 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.

ND - Non-Detected - Means not detectable (at lowest level for which contaminant can be measured).



An Information Statement from the EPA on Lead

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. Frederick County Division of Water and Sewer Utilities (DWSU) 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 Joshua Smith, Regulatory Compliance Department Head, at 301-600-2581. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

Sources of Lead in Drinking Water

Water is lead-free when it leaves the treatment plant, but lead can be released when the water comes in contact with pipes and plumbing fixtures that contain lead.

Lead Solder - This connects the piping. In 1987, lead solder was banned from use in household plumbing. If your home was built prior to 1987, it may contain lead solder.

Brass Faucets, Valves, or Fittings - Almost all faucets, valves, and fittings have brass components. Until 2014, brass faucets and fittings sold in the U.S. and labeled as 'lead free' could contain up to 8% lead.

The Frederick County Division of Water and Sewer Utilities strives to provide our customers with a safe, uninterrupted water supply. We hope that all of our customers recognize the need to protect our most precious resource, our community water supply.



Paperless Billing and Payment Due Reminders

The Frederick County Division of Water and Sewer Utilities (DWSU) offers a more convenient way to receive your quarterly water/sewer bill. We can send your bill directly to your email by visiting www.FrederickCountyMD.gov/paperless to sign up. We can also add an email address and/or phone number to your account so that you receive "Payment Due" reminders. Simply contact the billing department at (301) 600-2354.

Payment Options

Please call (866) 919-2043 or visit www.FrederickCountyMD.gov/wspaybill

for a list of all payment options, including registering for automatic payments from your checking or savings account. You can also register your account to make payments online with a credit/debit card or e-check.

Additional Information & Resources

For more information on your water supply or the information contained in this report you may want to contact the following agencies:

Frederick County Division of Water and Sewer Utilities
(301) 600-1825

Maryland Department of the Environment
(410) 537-3000 • (800) 633-6101

U. S. Environmental Protection Agency Safe Drinking Water Act Hotline
(800) 426-4791

Division of Water and Sewer Utilities Emergency Telephone Numbers
Monday thru Friday 7:00 AM - 3:30 PM - (301) 600-2187
Weekends, Holidays, and After-Hours - (301) 600-2194



WATERSIDE WATER QUALITY INFORMATION 2022

PWSID 0100029

During calendar year 2022, your water was supplied through the City of Frederick's water distribution system with water from the County's New Design system. However, because of the distances involved and mixing patterns within the distribution system, the majority of your water is actually produced by the City of Frederick Water Treatment Plants.

| REGULATED CONTAMINANTS - City of Frederick Combined Water Treatment Plants | | | | | | |
|--|-----------------------------------|-------------------------|------------------------------|------------------------------|-----------|--|
| Contaminant | Highest Level Allowed (EPA's MCL) | Ideal Goal (EPA's MCLG) | Highest Result | Range of Test Results | Violation | Typical Sources |
| Barium | 2 ppm | 2 ppm | 0.041 ppm | 0.027 - 0.041 | NO | Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries |
| Fluoride | 4 ppm | 4 ppm | 0.68 ppm | 0.53 - 0.68 | NO | Water additive which promotes strong teeth |
| Nitrate + Nitrite | 10 ppm | 10 ppm | < 1.0 ppm | N/A | NO | Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits |
| Atrazine | 3 ppb | 3 ppb | 0.34 ppb | ND - 0.34 | NO | Runoff from watershed source of this herbicide |
| Turbidity (TT) | 5% of values > 0.3 NTU | 0% | 0.00% | N/A | NO | Soil runoff |
| Turbidity | 1 NTU maximum | 0 NTU | 0.31 NTU | N/A | NO | Soil runoff |
| Total Organic Carbon Removal (TT) | N/A | N/A | Met All Removal Requirements | Met All Removal Requirements | NO | Naturally present in the environment; Indicator of trihalomethanes and other disinfection byproduct precursors |

| UNREGULATED CONTAMINANTS - City of Frederick Combined Water Treatment Plants | | | | | | |
|--|-----------------------------------|-------------------------|----------------|-----------------------|-----------|---------------------------------------|
| Contaminant | Highest Level Allowed (EPA's MCL) | Ideal Goal (EPA's MCLG) | Highest Result | Range of Test Results | Violation | Typical Sources |
| Chloride | N/A | N/A | 46.8 ppm | 6.5 - 46.8 | No | Primarily erosion of natural deposits |
| Sodium | N/A | N/A | 21.9 ppm | 1.4 - 21.9 | No | Primarily erosion of natural deposits |
| Sulfate | N/A | N/A | 49.5 ppm | ND - 49.5 | No | Primarily erosion of natural deposits |
| PFBS | N/A | N/A | 4.54 ppt | 2.97 - 4.54 | NO | See Note Below |
| PFHxS | N/A | N/A | 1.18 ppt | ND - 1.18 | NO | See Note Below |
| PFOA | N/A | N/A | 2.14 ppt | 1.51 - 2.14 | NO | See Note Below |
| PFOS | N/A | N/A | 3.87 ppt | 1.28 - 3.87 | NO | See Note Below |

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.

Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. PFOA and PFOS are two of the most prevalent PFAS compounds. In March 2023, EPA announced proposed Maximum Contaminant Levels (MCLs) of 4 ppt for PFOA and 4 ppt for PFOS, and a Group Hazard Index for four additional PFAS compounds. Future regulations could require additional monitoring as well as certain actions for systems above the MCLs or Hazard Index. EPA will publish the final MCLs and requirements by the end of 2023 or beginning of 2024. Additional information about PFAS can be found on the MDE website: <https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Pages.aspx>

| LEAD AND COPPER - Tested at customer's taps. Testing is done every 3 years and was last completed in 2020. | | | | | | |
|--|--------------------------------|-------------------------|-----------------------------------|---|-----------|---------------------------------|
| Contaminant | EPA's Action Level | Ideal Goal (EPA's MCLG) | 90% of Test Levels Were Less Than | # of Tests With Levels Above EPA's Action Level | Violation | Typical Sources |
| Lead | 90% of homes less than 15 ppb | 0 ppb | 2.7 ppb | 0 | NO | Corrosion of household plumbing |
| Copper | 90% of homes less than 1.3 ppm | 1.3 ppm | 0.053 ppm | 0 | NO | Corrosion of household plumbing |

WATERSIDE WATER QUALITY INFORMATION 2022

PWSID 0100029

| REGULATED CONTAMINANTS - Waterside Distribution System | | | | | | |
|--|-----------------------------------|-------------------------|----------------|-----------------------|-----------|---|
| Contaminant | Highest Level Allowed (EPA's MCL) | Ideal Goal (EPA's MCLG) | Annual Average | Range of Test Results | Violation | Typical Sources |
| Fluoride | 4 ppm | 4 ppm | 0.6 ppm | 0.4 - 0.9 ppm | NO | Erosion of natural deposits; Water additive which promotes strong teeth |
| Chlorine | 4 ppm | 4 ppm | 1.1 ppm | 0.6 - 1.8 ppm | NO | Water additive used to control microbes |

| DISINFECTION BYPRODUCTS - New Design Distribution System | | | | | | |
|--|-----------------------------------|-------------------------|---------------------------|-----------------------|-----------|--|
| Contaminant | Highest Level Allowed (EPA's MCL) | Ideal Goal (EPA's MCLG) | Highest LRAA ₁ | Range of Test Results | Violation | Typical Sources |
| Total Haloacetic Acids | 60 ppb | N/A | 55.5 ppb | 20.4 - 100.5 ppb | NO | Byproduct of drinking water chlorination |
| Total Trihalomethanes | 80 ppb | N/A | 54.4 ppb | 19.8 - 81.2 ppb | NO | Byproduct of drinking water chlorination |

1- Compliance is based on the Locational Running Annual Average (LRAA) for each sample site and are calculated quarterly.

| BACTERIA IN TAP WATER -New Design Distribution System. Minimum of 2 samples per month. | | | | | | |
|--|-----------------------------------|-------------------------|---|-----------|--------------------------------------|--|
| Contaminant | Highest Level Allowed (EPA's MCL) | Ideal Goal (EPA's MCLG) | Highest Monthly Number of Samples With Total Coliform Present | Violation | Typical Sources | |
| Total Coliform | 1 sample contains Total Coliform | 0 | 0 | NO | Naturally present in the environment | |

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| <p>How to Read the Water Quality Data Table EPA establishes the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to regulatory limits. <u>Substances not detected are not included in the table.</u></p> <p>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.</p> <p>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.</p> <p>Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a system must follow.</p> <p>Units in the Table: ppm is parts per million (or 1 gallon in 1 million gallons), ppb is parts per billion (or 1 gallon in 1 billion gallons)</p> |
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Health Effects:

None