



Annual Drinking Water Quality Report
City of Bowie
January 1 to December 31, 2023

Public Drinking Water System #016-0002

We are pleased to present to you another in a series of annual water reports that will keep you informed about the City of Bowie's efforts to supply quality water and services to you every day.

An annual report will be available by July 1 of each year that will keep you informed of the previous calendar year's water quality.

This Water Quality Report is for those areas that are served by the City of Bowie Water Plant and should not be confused with areas served by the Washington Suburban Sanitary Commission.

The sources of drinking water (both tap 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.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and minerals, 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 agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining.

The source water for the City's consumption is ground water obtained from five wells in three major underground confined aquifers: Well #1 - Magothy formation; Wells #2R, #3 - Patapsco formation; and Wells #4R2 and #5 - Patuxent formation. These aquifers range in depth from approximately 200 feet to 1,160 feet. To protect this resource, the City has identified potential sources of contamination through the development of a Wellhead Protection Plan. The Wellhead Protection Report also contains information on delineated wellhead protection areas and aquifer recharge areas. The Wellhead Protection Report is available for viewing at the Bowie Branch Library.

Confined aquifers such as those used by the City of Bowie afford very good protection from surface contaminants, but we are constantly monitoring our water supply to maintain high water quality standards. The Maryland Department of the Environment has performed a Source Water Assessment for the City of Bowie. The Summary of the assessment is included with this report. The complete Source Water Assessment can be viewed at the Bowie Branch Library and on the City of Bowie website – www.cityofbowie.org.

The following report is designed to inform you of water quality standards and what they mean. If you have any questions regarding this report, please contact Nicholas Nosacek, City of Bowie Water Plant Superintendent, 301-809-3060.

This Water Quality Report covers the period of January 1 to December 31, 2023. The City of Bowie and the Maryland Department of the Environment routinely monitor your drinking water to detect contaminants, according to Federal and State laws. Drinking water, including bottled drinking water, may be reasonably 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 (1-800-426-4791).

The City of Bowie's water is tested for over 100 contaminants. Only regulated contaminants or unregulated contaminants that are required to be monitored that are at or above the Minimum Detection Level, are required to be in the Annual Drinking Water Quality Report. If you would like a copy of the complete listing of contaminants that have undergone testing, there will be copies available at the reception desk or the Finance Department at City Hall. The complete listing of tested contaminants and the Annual Drinking Water Quality Report will also be available on the City's website – www.cityofbowie.org.

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 Bowie 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 The City of Bowie Water Plant 301-809-3060. 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>.

Residents are urged to participate in all matters related to the City, by attending City Council meetings. This is also true with water related matters, infrastructure, or water quality. City Council meetings are usually held the first and third Mondays of each month. Check the City's website – www.cityofbowie.org/agenda or contact City Hall at 301-262-6200 for the meeting schedule. All meetings are held in the Council Chambers at City Hall, located at 15901 Fred Robinson Way. City Council meetings are also live streamed at www.cityofbowie.org/live or can be viewed on [YouTube](https://www.youtube.com) or on the Bowie government channel (Verizon 10/Comcast 71 & 996). Comments for the Citizen Participation portion of each meeting will be accepted via email at cityclerk@cityofbowie.org. Comments must be received by 7 p.m. on the day of the City Council meeting.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised people such as people with cancer undergoing chemotherapy, people 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 provider. 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).

The chart that follows in this report contains terms and abbreviations that you may not be familiar with. To help provide a better understanding of the terms used, the following definitions and statements are provided:

- Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. The MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.
- 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.
- Milligram per liter (mg/L): One mg/L is equal to one milligram per liter and is equivalent to one drop in 10 gallons.
- Microgram per liter (µg/L): One µg/L is equal to one microgram per liter and is equivalent to one drop in 10,000 gallons.
- picoCuries Per Liter (pCi/L): A unit of measurement used to describe the level of activity or decay of a radioactive element.

- Locational Running Annual Average (LRAA): Is the highest Running Annual Average calculated for each of the four monitoring locations required for testing and is not to be confused with an arithmetic average of all results.
- Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements the system must follow.
- Monitoring Frequency: The State does not require annual monitoring for contaminants because the concentration of these contaminants does not change frequently. Therefore, some of our data, though representative, is more than one year old.

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Contaminant	Test Results	MCL	MCLG	Test Date	Sources of Contamination
Barium	0.018 mg/L	2.0 mg/L	2.0 mg/L	3/16/22	Erosion of Natural Deposits
Nitrate	N/D	10 mg/L	10 mg/L	5/3/23	Runoff from Fertilizer
Fluoride	0.59 mg/L	4 mg/L	4 mg/L	3/16/22	Erosion of Natural Deposits; Additive to Drinking Water
Gross Alpha	N/D	15 pCi/L	0	7/23/19	Erosion of Natural Deposits
Radium 228	N/D	5 pCi/L	0	10/22/19	Erosion of Natural Deposits
Total Trihalomethanes		80 µg/L	N/A	Test Date	By-product of Drinking Water Chlorination
Detected Range	3.4 - 5.4 µg/L			9/7/2023	NOTE : City of Bowie has been approved for reduced monitoring under the Stage 2 Disinfection by-products Rule.
Highest level detected	5.4 µg/L				
Haloacetic Acids		60 µg/L	N/A		By-product of Drinking Water Chlorination
Detected Range	ND-1.1 µg/L			9/7/2023	
Highest level detected	1.1 µg/L				
The Action Level for Lead is 15 µg/L @ the 90th percentile level of all samples taken.					
Lead	ND	15 µg/L	0	2023	Corrosion of Household Plumbing Systems; Erosion of Natural Products NOTE: Sampling completed August 2023
The Action Level for Copper is 1.3 PPM @ the 90th percentile level of all samples taken.					
Copper	0.022mg/L	1.3 mg/L	1.3 mg/L	2023	Corrosion of Household Plumbing Systems; Erosion of Natural Deposits; Leaching from Wood Preservatives

N/D = Where N/D appears, the contaminant monitored for was not detected.
N/A = Where N/A appears, the MCL or MCLG have not been set by the EPA

CY2023 PFAS Statement

What is PFAS? PFAS – or 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. The results are available on MDE’s website: <https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx>.

PFOA and PFOS are two of the most prevalent PFAS compounds. PFOA and PFOS concentrations from samples taken from our water system in 2021 were; ND- not detectable.

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). The proposal for HFPO-DA (GenX), PFBS, PFNA and PFHxS is to use a Hazard Index of 1.0 (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, and testing will run through 2025. 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. Testing for Bowie will occur in 2024

Maryland Department of the Environment Source Water Summary

The Maryland Department of the Environment’s (MDE) Water Supply Program has conducted a Source Water Assessment for the City of Bowie. The major Components of this report as described in Maryland’s Source Water Assessment Plan (SWAP) are: 1) delineation of an area that contributed water to the source; 2) identification of potential sources of contamination; 3) determination of susceptibility of the water supply to contamination. Recommendations for management of the assessment area conclude this report.

The sources of Bowie’s water supply are three Coastal Plain confined aquifers – the Magothy, Patapsco and Patuxent. Five wells are currently being used to pump the water out of these aquifers. The source water assessment area was delineated by the Water Supply Program using methods approved by the U.S. EPA.

Potential sources of contamination within the assessment were identified based on MDE site visits, a review of MDE’s databases. Well information and water quality data were also reviewed.

The susceptibility analysis for Bowie’s water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that Bowie’s water supply is not susceptible to contaminants originating at the land surface due to the protected nature of confined aquifers. The water supply is susceptible to naturally occurring iron and manganese in the aquifers. Treatment process is designed remove iron and manganese from the raw water.