

On behalf of the City of Salisbury's Department of Water Works, I am pleased to present 2022's Water Quality Report. In 2022, the committed professionals of our Water Works Department produced 2.1 billion gallons of clean, award-winning water for residents.

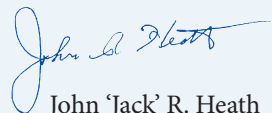
Under the guidance of Department Director Cori Cameron, Water Works staff have continued maintaining and improving the City's existing water infrastructure through multiple obstacles and challenges over the past few years. While trying to understand and adjust to a new normal after the COVID-19 crisis, the essential workers of our Water Works Department continually provided the reassurance our City residents needed to get through this challenging time by providing consistent utilities. Thank you and congratulations to the women and men of our Department of Water Works for their relentless vigor and topnotch work, providing continuous water for each and every one of our residents.

Looking toward the future, we have continued upgrades to our water system by adding a mixing system to the Salisbury University Water Tower and Ground Storage Tank to improve water quality, rehabilitated two park wells, replaced roof to historic Park Plant Aerator building, and provided water service to the Salisbury Airport. Current projects under construction include the new Paleo Well 3 at the Paleo Water Plant, Phase one of the Raw Water Line Replacement, and well rehabilitation.

As it has been for years, Salisbury's water supply remains sustainable, dependably-delivered, and in superb supply, due to our position above the Paleochannel.

Please contact me with any questions you may have about Salisbury's award-winning water.

Yours in Service,



John 'Jack' R. Heath  
Mayor of Salisbury, MD

**THE CITY OF SALISBURY**  
WATER TREATMENT PLANT  
2322 SCENIC DRIVE  
SALISBURY, MD 21801

# WATER QUALITY REPORT

PWSID 0220004



THE CITY OF  
**SALISBURY**  
MARYLAND

We are pleased to present you with our 2022 Quality Water Report. This report is designed to educate and inform you about the quality water and services we deliver to you every day. Our constant goal is to provide the consumer with a consistent and reliable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The following report is provided in compliance with federal regulations and will be provided annually. This report shows the quality of our finished drinking water and what that quality means.

The source of Salisbury's water supply is a shallow unconfined Coastal Plain aquifer, known as the Quaternary System. The city currently uses 11 wells from two Water Plants to obtain our drinking water. The two northernmost wells draw water from the deeper and highly productive paleochannel sediments within the Quaternary System. An aquifer is a sort of underground reservoir, which is tapped by drilling wells and pumping the water to the surface for distribution. The earth between surface sources of contamination and these underground reservoirs help to purify the water before it actually reaches the aquifer, making it easier for us to treat before we pump it into the water distribution system. The water treatment process includes aeration, pre-chlorination, filtration, iron removal, disinfection, corrosion control and fluoride addition. The water storage towers are routinely removed from service to be cleaned and inspected. Our hydrant-flushing program operates on a routine basis to assist in providing a clear and clean product to our consumers.

Reliable drinking water is collected, treated, tested and delivered to your home and business 24 hours a day, seven days a week. The operations staff consists of one Water Treatment Class T4 Maryland certified Superintendent, five Water Treatment Class T4 Maryland certified Operators, three Water Treatment Class T4 Maryland temporary Operators, and one Water Distribution Operator. The operations staff are members and attend meetings and training seminars of the American Water Works Association (Chesapeake Section), Water and Wastewater Operators Association and the Maryland Rural Water Association. Together they have attended more than 100 hours of Continuing Education training in the past year in an effort to keep up-to-date with the latest in water treatment techniques, safety and homeland security. Their goal is to provide the consumer with the best water possible.

The Maryland Department of the Environment's Water Supply Program has conducted a Source Water Assessment for the City of Salisbury. The susceptibility analysis for Salisbury'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 all of Salisbury's wells are susceptible to contamination by volatile organic compounds, and synthetic organic compounds. In addition, Salisbury's Park well field is susceptible to contamination by nitrate. The water supply is not susceptible to other regulated inorganic compounds, and radiological or microbiological contaminants.

Everyone needs to help prevent contaminants from entering source waters in the first place. Protection of the watershed goes hand-in-hand with ensuring the appropriate treatment is provided by your utility. For more information, the Wicomico County Public Library has a copy of Salisbury's Source Water Assessment.

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 and radioactive substances. All drinking water, including **bottled drinking water**, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these constituents does **not necessarily** pose a health risk. Maximum Contaminant Levels (MCLs) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791**.

The City of Salisbury Water Plants routinely monitor for constituents in your drinking water according to Federal and State laws. The following table, entitled "Annual Contaminants Monitoring Report", shows the results of our monitoring for the period of January 1 to December 31, 2022. In this table, you will find many terms and abbreviations you may not find familiar. To help you better understand these terms we've provided the following definitions:

*Avg* - Regulatory compliance with some MCLs are based on running annual average of monthly samples.

*Maximum Contaminant Level* - The "Maximum Allowed" (MCL) is 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. MCLs are enforceable standards.

*Maximum Contaminant Level Goal* - The "Goal" (MCLG) is 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 and are non-enforceable public health goals.

*Maximum Residual Disinfectant Level (MRDL)* - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

*Maximum Residual Disinfectant Level Goal (MRDLG)* - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

*Na* - Not applicable.

*Non-Detects (ND)* - laboratory analysis indicates that the constituent is not present or not detectable with best available technology.

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Parts per trillion (ppt) or Nanograms per liter (ng/l)* - is equal to one drop in one trillion gallons of water.

*Picocuries per liter of air (pCi/L)* which is one of the preferred measurements for the speed of decay in radon, is equal to one trillionth of a curie.

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

*Unregulated Contaminants* - (UNREG CONT.) are those for which EPA has not established drinking water standards. The purpose of monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.



ANNUAL CONTAMINANTS MONITORING REPORT CITY OF SALISBURY POTABLE WATER SYSTEM									
Water Quality Data									
DETECTED REGULATED CONTAMINANTS									
SUBSTANCE	UNITS	LEVEL FOUND		DATE	MCL	MCLG		VIOLATION	LIKELY SOURCE OF CONTAMINATION
RADIOACTIVE CONTAMINANTS									
Beta/photon emitters	pCi/L	Range 4.9 – 6.9		2021	50	Zero		NO	Decay of natural and man-made deposits.
INORGANIC CONTAMINANTS									
Barium	ppm	0.065 ppm - 0.173 ppm		2022	2 ppm	2 ppm		NO	Discharge of drilling wastes; metal refineries; erosion of natural deposits.
Fluoride	ppm	0.34 ppm - 0.57 ppm		2021	4 ppm	4 ppm		NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories.
Nitrate (as Nitrogen)	ppm	5 ppm (Annual Range ND-5.3)		2022	10 ppm	10 ppm		NO	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Chromium	ppm	0.007 ppm		2022	0.1 ppm	0.1 ppm		NO	Naturally occurring element; used in making steel & other alloys.
DETECTED UNREGULATED CONTAMINANTS									
PFOS	ppt	3.4 ppt - 8.2 ppt		2022	4 ppt proposed	4 ppt		NO	Human made chemical.
PFOA	ppt	1.0 ppt - 8.1 ppt		2022	4 ppt proposed	4 ppt		NO	Human made chemical.
PFHxS	ppt	3.2 ppt - 3.8 ppt		2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index		NO	Human made chemical.
PFBS	ppt	ND - 4.5 ppt		2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index		NO	Human made chemical.
PFNA	ppt	<1.5		2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index		NO	Human made chemical.
HFPO-DA	ppt	<1.0		2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index		NO	Human made chemical.
SUBSTANCE	UNITS	DISTRIBUTION SYSTEM			MCL	MCLG	VIOLATION	LIKELY SOURCE OF CONTAMINATION	
		LEVEL FOUND	DATE	Locational Annual Running Average (LRAA)					
INORGANIC CONTAMINANTS									
Cu 90 Copper 90th %	ppm	.092 ppm	08/24/2021	N/A	TT Action Level = 1.3 ppm	1.3 ppm	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
PB90 Lead 90th %	ppm	ND	8/24/2021	N/A	TT Action Level = 15 ppb	Zero	NO	Corrosion of household plumbing systems, erosion of natural deposits.	
DISINFECTANTS AND DISINFECTION BYPRODUCTS									
Chlorine	ppm	0.9 ppm - 1.0 ppm	2022	0.9 ppm	MRDL = 4.0	MRDLG = 4	NO	Water additive used to control microbes.	
TTHM (Total Trihalomethanes)	ppb	Range ND - 8	Quarterly/2022	2.0 ppb	80 ppb	N/A	NO	By-product of drinking water disinfection.	
HAA5 (Haloacetic Acids)	ppb	ND - 1 ppb	Quarterly/2022	2.0 ppb	60 ppb	N/A	NO	By-product of drinking water disinfection.	

**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. 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. PFOA concentrations from samples taken from our water system in 2022 ranged from [1.04]-[8.13] parts per trillion (ppt); PFOS concentrations from samples taken from our water system in 2022 ranged from [3.38]-[8.23] ppt. 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 would require additional monitoring as well as certain actions for systems above the MCLs. 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: [mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx](https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx)

Our system monitoring detected Total Trihalomethanes (TTHM), considerably **below the MCL**. It is important to understand that the detection of this substance in the drinking water **does not** constitute a known health threat because it was found only at a level less than the MCL and below the level, that EPA currently feels may constitute a health threat. Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer

Our system had no problems with Total Coliform Bacteria this year. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Our city lab runs 31 total coliform samples per month. We have not experienced any problems in 2019 and we do not anticipate any problems with coliform bacteria.

Nitrates were detected in our groundwater **below the MCL**. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

If present, elevated levels of 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 Salisbury is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds

to 2 minutes before using water for drinking or cooking. **If you are concerned about lead in your drinking water, you may wish to have your water tested.** Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Specific to lead, the EPA issued the Lead and Copper Rule, which requires corrosion control treatment at the plant. **Houses built before 1986, have an increased risk of lead in the plumbing. You may want to test your water if your home has lead pipes (lead is a dull gray metal that is soft enough to be easily scratched with a house key) or your non plastic plumbing was installed before 1986. Please call our office if you would like to participate in our tri-annual lead and copper sampling program.**

The table shows that all of the contaminants, which were monitored in accordance with State and Federal laws, were of levels less than the MCL and below the level, that EPA currently feels may constitute a health threat. EPA believes the water is safe at these levels. Over 100 additional contaminants were analyzed in our drinking water and all were Non-Detected Contaminants.

### IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

#### Availability of Monitoring Data for Unregulated Contaminants for the City of Salisbury

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don’t yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our

customers, you have a right to know that these data are available. The unregulated contaminants detected in our water are shown on the Contaminants Monitoring Chart. A complete list of all unregulated contaminants that were tested for are listed on the EPA website [EPA.gov/drink/contaminants](https://www.epa.gov/drink/contaminants). If you are interested in examining the City of Salisbury results, please contact the City of Salisbury Water Plant.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

You may see our staff at local events around town promoting water conservation. Take time to visit our booth and ask questions. Make conserving water a daily part of your life. And remember when you save water, you save energy and money! If you would like to receive a water conservation packet with water saving tips in the home, garden, or for children, please contact the water plant at 410-548-3199 and one can be mailed to your home.

We are committed to continuing to provide an excellent service that our customers can take for granted. Help us to provide your family with clean, quality water by participating in official City of Salisbury water sampling programs. If you have any questions about this report or concerning your drinking water, please contact **Ronald Clapper at the City of Salisbury Water Plant at 410-548-3199.**