



The Town of Poolesville is pleased to present this year's Annual Water Quality Report. This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

Poolesville delivers a safe and reliable water supply to approximately 6,000 residents and several businesses. The system consists of about twenty-five miles of ductile iron water pipe and two storage tanks. Our system does not contain any lead mains or service lines. Poolesville relies entirely upon groundwater and is withdrawn from 10 wells, with one well, #2 under the direct influence of surface water. State permits allow an annual average daily withdrawal of 650,000 gallons per day (GPD) and a maximum monthly average of 910,000 GPD. These wells are drilled from 285 to 800 feet deep into the New Oxford Formation Aquifer. Groundwater is derived from rainwater, creek, and riverbed percolation. As the water travels downward through the soil, many of the impurities are removed. Our groundwater quality is good and requires only chlorine, as mandated by the Safe Water Drinking Act.

Each year, we test the water for several different contaminants. Many of these tests did not detect even a trace amount of contaminants in our water. This report shows only the detectable results of our monitoring for the period of January 1 - December 31, 2022. The report is not published until June as the final analysis and MDE review must occur prior to release. We hope that you find the information in this Water Quality Report useful in illustrating our commitment to provide our community with a safe and reliable water supply. For more information, contact Wade Yost at 301-428-8927 or attend a Commissioner's meeting every first and third Monday at Poolesville Town Hall, 19721 Beall Street.

Why are contaminants in my drinking water?

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 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 at (800) 426-4791.

The sources of drinking water (both tap water 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 can pick up substances resulting from the presence of animals or from human activity, including:

- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming;
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities;
- Microbial contaminants, such as viruses and bacteria, that may come from wastewater treatment plants, septic systems, agricultural livestock operations and wildlife;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses; and
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The USEPA and Maryland Department of the Environment (MDE) impose testing requirements and regulations that limit the amount of certain contaminants in water provided by public water systems. Although Poolesville in conjunction with the MDE sample for several different contaminants, only those present are listed in the following tables. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The MDE requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791). A source water assessment was done in 2006 and can be viewed here: poolesvillemd.gov/271/water-sewer.

The MDE requires certain health effects language for some contaminants even though a violation may not exist.

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.

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. Their concentrations from samples taken in 2022 are listed in the attached tables. 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-age.aspx

The Town has been proactive and aggressive in pursuing solutions to remove PFAS from our water supply. Two wells have been taken offline that contained elevated PFAS concentrations and we are currently working with the MDE testing different filtration media. Once the testing is complete and the MDE approves the appropriate filtration system, the units will be installed.

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. Poolesville 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 Townhall. 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>.

Radon is a naturally occurring gas present in some groundwater. Inhaled radon has been linked to lung cancer and may pose a health risk when inhaled after the release from water into the air. This inhalation could occur during showering, bathing, washing dishes, or washing clothes. The radon gas released from drinking water is a relatively small part of the total radon found in air. One major source of radon gas is from the soil, where the gas can seep through the foundations of homes. It is not clear whether ingested (i.e. taken through the mouth) radon contributes to cancer or other adverse health conditions. If you are concerned about radon in your home, tests are available to determine the total exposure level.

Definitions Used in this Report	
PPM	Parts per million, or milligrams per liter - or one ounce in 7,350 gallons of water.
PPB	Parts per billion, or micrograms per liter - or one ounce in 7,350,000 gallons of water.
PPT	Parts per trillion
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which no health risk is known or expected. MCLGs ensure a margin of safety for sensitive individuals.
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.
AL	Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
TT	Treatment Technique, A required process intended to reduce the level of a contaminant in drinking water.
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.
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.
ND	Not detectable

Water Quality Data

Lead & Copper

Substances	MCL G	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Sources in Drinking Water
Lead (ppb)	0	15	<5	0	ppb	No	Corrosion of household plumbing systems
Copper (ppm)	1.3	1.3	0.88	0	ppm	No	Corrosion of household plumbing systems

Disinfectants and Disinfection By-Products

Substances	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Sources in Drinking Water
Chlorine	0.9	0.8 – 0.9	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes
Haloacetic acids	4.6	3 – 4.6	No Goal	60	ppb	No	Disinfection byproduct
Trihalomethanes	18.08	11.06 – 18.08	No Goal	80	ppb	No	Disinfection byproduct

Inorganic Contaminants

Substances	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Sources in Drinking Water
Barium	.866	0.083 – .866	2	2	ppm	No	Discharge from drilling wastes; Erosion of natural deposits.
Arsenic	4.16	0 – 4.16	0	10	ppb	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Chromium	1.71	0 – 1.71	100	100	ppb	No	Discharge from steel and pulp mills; Erosions of natural deposits.
Fluoride	0.2	0 – 0.2	4	4.0	ppm	No	Erosion of natural deposits; water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	7	.6 - 7.2	10	10	ppm	No	Runoff from fertilizer; leaching from septic tanks, sewage, erosion of natural deposits.
Selenium	2.55	0 – 2.55	50	50	ppb	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants

Substances	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Sources in Drinking Water
Beta/photon emitters	4.6	0 – 4.6	0	50	pCi/L	No	Decay of natural and manmade deposits.
Combined Radium 226/228	3.4	0 – 3.4	0	5	pCi/L	No	Erosion of natural deposits.
Gross alpha excluding radon and uranium	14	0 – 17.3	0	15	pCi/L	No*	Erosion of natural deposits.
Uranium	24.197	0 – 38.74	0	30	Ug/l	No	Erosion of natural deposits.

Quarterly Averages are used to determine the exceedance of the MCL.

* Regulatory compliance with some MCL's are based on running annual average of monthly samples.

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Sources of Contamination
Highest single measurement	1 NTU	0.297 NTU	No	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	No	Soil runoff

Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and effectiveness of our filtration.

Unregulated Contaminants

Substances	Average Level Detected	Range of Level Detected	Units
PFBS	4.32	2.42 – 9.78	ppt
PFHxS	4.71	ND – 20.3	ppt
PFOA	6.09	ND – 18.6	ppt
PFOA	5.11	1.2 – 11.7	ppt
Radon	1,174	ND – 1,790	pCi/L

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