

## How is my water treated?

The City of Rockville's Water Treatment Plant was put into service in 1958 and, at that time, was capable of producing 4 million gallons per day (MGD) of treated water. The plant was upgraded in 1967 to increase production to 8 million gallons per day. In the mid-1990s, and in 2017, additional upgrades to the plant were made to meet EPA and MDE regulations. Since then, an average of 5 million gallons per day of raw (untreated) water is withdrawn from the Potomac River, treated at the plant and distributed to the city's water customers. Once at the plant, the water is put through a six-step treatment process to ensure it meets Safe Drinking Water Act standards. Once treated, the water is sent through a series of underground water lines and water storage tanks and to your faucet.

**The river water is treated to remove suspended sediments, algae, parasites, bacteria, metals and other contaminants through the following processes:**

### Screen

Water from the Potomac River is pumped through a screen to remove large debris such as sticks, leaves and rocks. If algae blooms are present in the raw water withdrawn from the river, it is treated with potassium permanganate.

### Coagulation

Water is treated with chemical compounds that make small suspended particles stick together and settle out of the water. This particle conglomerate is removed from the water prior to filtration.

### Sedimentation

Water is passed through a settling basin or clarifier, allowing time for mud, sand, metals and other sediment to settle out.

### Filtration

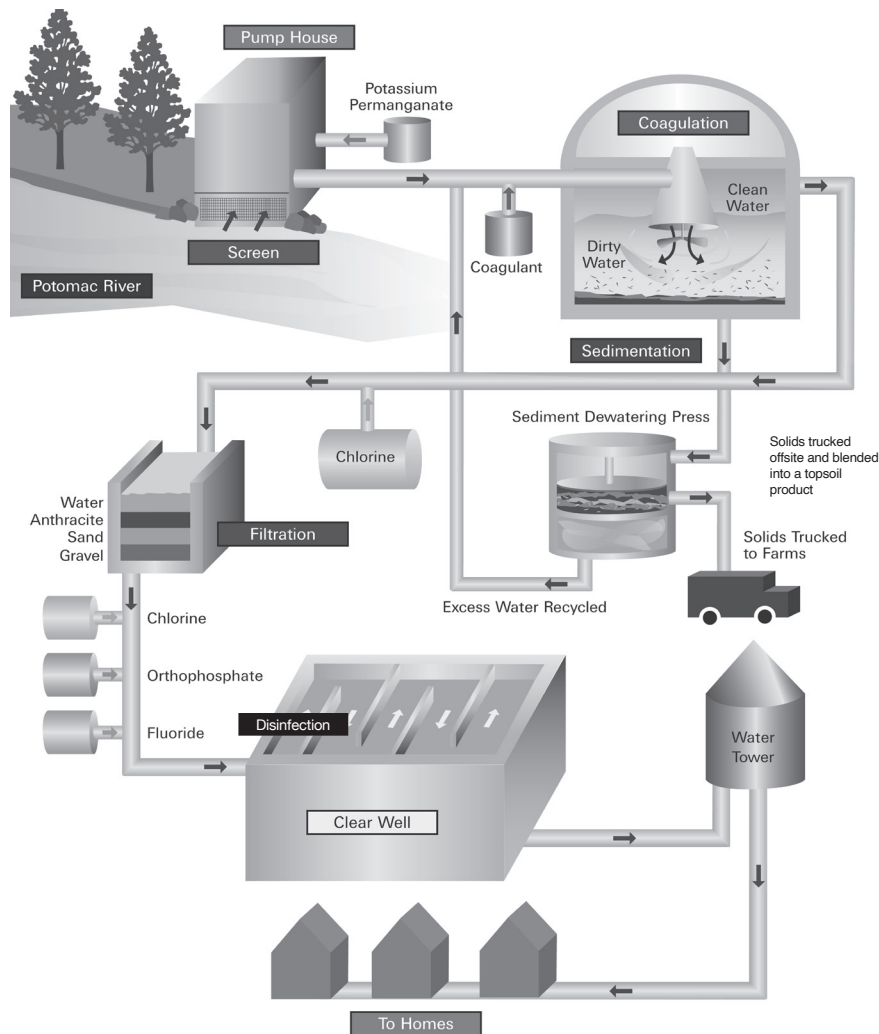
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining contaminants.

### Disinfection

Chlorine is added to the water to kill and/or inactivate any remaining pathogens. Fluoride is added to prevent tooth decay and a corrosion inhibitor is added to preserve the pipes that deliver the water to homes and businesses.

### To Homes and Businesses

The treated water is stored in two storage tanks and is gravity-fed to houses and businesses when needed. The water is sampled at the plant, in the distribution system and at the tap in homes and businesses for lead, copper, other potentially harmful contaminants, bacteria and residual chlorine.



# Annual Drinking Water Quality Report

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[www.rockvillemd.gov/annualwaterquality2022](http://www.rockvillemd.gov/annualwaterquality2022)

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Dear Valued Customer,

The City of Rockville is proud to present our water quality report. Once again Rockville's drinking water met or exceeded all federal water quality regulation limits. We invite you to review this report for details about our city's drinking water source, treatment, distribution, safety and quality. Rockville's water system serves 70% of the city, or approximately 13,000 accounts and 52,000 community members. The Washington Suburban Sanitary Commission serves the remainder of the city.

At our water treatment plant on the Potomac River, plant operators actively monitor water quality to ensure protective levels of chlorine and corrosion control, which prevents lead and copper in distribution pipes from leaching into drinking water. Thousands of daily, monthly, quarterly and annual laboratory tests help monitor our water quality and determine the correct type and level of treatment necessary to provide our customers with safe, reliable drinking water.

This is the eighth consecutive year the city received the Directors Award for its voluntary participation in the Partnership for Safe Water. The award recognizes the competence of the city's water plant operators and their desire to go beyond regulatory standards to achieve the highest water quality for Rockville's water customers. This requires considerable effort by the operational staff of the water plant. It is the staff's expertise, dedication and passion that make this award possible.

The water treatment plant began an electrical upgrade project in late 2021. The project, which is expected to continue into early 2023, will replace aged electrical systems and components that provide primary power to the plant. Also included in the project is an update of the main building roofing, HVAC and occupied operational areas, which have been unimproved since 1958. This project will provide the plant with modern electrical components and associated controls to ensure system reliability, safety, and capacity. Modern laboratory facilities and occupied areas will provide code compliant, safer spaces for employees.

We welcome you to learn more at [www.rockvillemd.gov/water](http://www.rockvillemd.gov/water). We thank you for your continued support of our mission to maintain a reliable water system to provide safe and high-quality drinking water to our customers.

Craig L. Simoneau, Director of Public Works, City of Rockville

## Is my water safe?

The City of Rockville's drinking water is safe, as set forth in the Environmental Protection Agency (EPA) regulations and adopted and enforced by the Maryland Department of the Environment (MDE). For the 2021 calendar year, the city's water met or exceeded all water quality requirements.

The Water Quality Data Table shown on page 2 of this report lists all the drinking water contaminants that were detected. None of these contaminants exceeded the drinking water standards. This report will help to inform you about the quality of your water and includes details about where your water comes from, what it contains and how it compares to standards set by state and federal regulatory agencies.

## Why are contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain 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 Safe Drinking Water hotline at 1-800-426-4791.

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.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts 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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

**"This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it."**

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다.

此報告包含有關您的飲用水的重要資訊。請人幫您翻譯出來，或請能看懂此報告的人將內容說給您聽。

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

## Water Quality Data: WATER TREATMENT PLANT PERFORMANCE

DETECTED REGULATED CONTAMINANTS	MCLG OR MRDLG	MCL, TT OR MRDL	HIGHEST LEVEL DETECTED	RANGE LOW	HIGH	IS THIS A VIOLATION?	LIKELY SOURCE OF CONTAMINATION
Turbidity (NTU)	NA	TT=1.0	0.17	0.02	0.17	No	Soil runoff.
Lowest monthly % meeting limit	NA	TT=0.3	NA	100%	NA	No	Soil runoff.
Residual Chlorine (ppm)	4	TT>0.2	1.1	Met all TT requirements.		No	Water additive to control microbes.
Total Organic Carbon	NA	TT	Measured monthly	Met all TT requirements.		No	Naturally present in the environment.

DETECTED UNREGULATED CONTAMINANTS*	MCLG	MCL	AVERAGE	RANGEIS LOW	HIGH	IS THIS A VIOLATION?	LIKELY SOURCE OF CONTAMINATION
HAA6Br (ppb)	NA	NA	10.4	3.7	17.6	No	Byproduct of drinking water disinfection.
HAA5 (ppb)	NA	60	18.7	10.1	21.6	No	Byproduct of drinking water disinfection.
HAA9 (ppb)	NA	NA	27.6	6.3	56.4	No	Byproduct of drinking water disinfection.
Manganese (ppb)	NA	NA	6.0	1.1	10.8	No	Naturally present in the environment.

\*Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Rockville's testing detected only four of the 30 compounds included in the fourth round of unregulated contaminant monitoring. The detections were one metal and three haloacetic acid disinfection byproduct groups.

INORGANIC CONTAMINANTS	MCLG	MCL	HIGHEST LEVEL DETECTED OR AVERAGE	RANGE LOW	HIGH	IS THIS A VIOLATION?	LIKELY SOURCE OF CONTAMINATION
Barium (ppm)	2	2	0.3	0.3	0.3	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride (ppm)	4	4	0.5	0.51	0.51	No	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (ppm), measured as nitrogen	10	10	2	2.02	2.02	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

## SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES

Atrazine (ppb)	3	3	ND	NA	NA	No	Runoff from herbicide used on row crops.
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## Water Quality Data: WATER DISTRIBUTION SYSTEM

TOTAL COLIFORM	MCLG	MCL	HIGHEST NO. OF POSITIVE TOTAL COLIFORM	MCL FECAL COLIFORM OR E.COLI	TOTAL NO. OF POSITIVE FECAL COLIFORM OR E.COLI SAMPLES	IS THIS A VOILATION?	LIKELY SOURCE OF CONTAMINATION
% positive samples per month**	0	5%	0	0	0	No	Naturally present in the environment.

\*\*Minimum sampling frequency of 60 samples per month. 752 total samples tested. Met TT requirements.

DISINFECTANTS & DISINFECTION BYPRODUCTS	MCLG OR MRDLG	MCL	RANGE LOW	HIGH	IS THIS A VIOLATION?	LIKELY SOURCE OF CONTAMINATION
Residual Chlorine (ppm), measured as free chlorine	4.0	4.0	1.0	1.1	No	Water additive to control microbes.
Total Trihalomethanes (ppb)	NA	80	12.5	44.1	No	Byproduct of drinking water disinfection.
Haloacetic Acids (HAA5)	NA	60	7.7	42.3	No	Byproduct of drinking water disinfection.

METALS AT CONSUMER TAPS	MCLG	ACTION LEVEL	90TH PERCENTILE	NO. OF SITES OVER ACTION LEVEL	UNITS	IS THIS A VIOLATION?	LIKELY SOURCE OF CONTAMINATION
Copper (ppm)	1.3	1.3	0.130	0	ppm	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (ppb)0	0	15	ND	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

"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. Currently, there are no federal regulations (i.e. Maximum Contaminant Levels (MCLs)) for PFAS in drinking water. However, the U.S. Environmental Protection Agency (EPA) has issued a Health Advisory Level (HAL) of 70 parts per trillion (ppt) for the sum of PFOA and PFOS concentrations in drinking water. While not an enforceable regulatory standard, when followed, the EPA HAL does provide drinking water customers, even the most sensitive populations, with a margin of protection from lifetime exposure to PFOA and PFOS in drinking water. Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. The combined PFOA and PFOS concentration from samples taken from our water system was 2.35 ppt. MDE anticipates that EPA will establish an MCL for PFOA and PFOS in the near future. This would entail additional monitoring. Additional information about PFAS can be found on the MDE website: [mde.maryland.gov](http://mde.maryland.gov) "

## Do I need to take special precautions?

Some people may be more vulnerable than the general population to contaminants in drinking water. 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, and some elderly and infants can be at risk from infections. These people should seek advice from their health care providers about drinking water. EPA and the Centers for Disease Control (CDC) issue guidelines on appropriate measures to reduce the risk of infection by cryptosporidium and other microbial contaminants. Call the EPA Safe Drinking Water hotline at 1-800-426-4791 for more information.

## Additional information for lead

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 Rockville 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 two 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Where does my water come from?

Our primary source of water is the Potomac River. When Rockville's water plant is not operating because of necessary improvements or maintenance activities, or in cases of regional drought, Rockville purchases water from the Washington Suburban Sanitary Commission (WSSC). In 2021, Rockville purchased about 323,000 gallons of water (approximately 0.02% of our annual production) from WSSC, which also receives its water from the Potomac River.

## Source water assessment and its availability

MDE performed a source water assessment of the Potomac River as it applies to the Rockville water plant. The 2002 report may be obtained online or by contacting the Water Supply Program at MDE, 1800 Washington Blvd., Baltimore, MD 21230. You can also call 410-537-3589. For more information on the Maryland Source Water Protection Program, go to [www.mde.state.md.us/programs/water/water\\_supply/source\\_water\\_assessment\\_program](http://www.mde.state.md.us/programs/water/water_supply/source_water_assessment_program).

## For more information, please contact:

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 This Drinking Water Quality Report is available on the city's website and posted online at [www.rockvillemd.gov/annualwaterquality2022](http://www.rockvillemd.gov/annualwaterquality2022). Paper copies are also available in City of Rockville facilities, including City Hall and recreation centers. If you would prefer a paper copy of the Drinking Water Quality Report mailed to your home, please call 240-314-8500. Please share this information with all other people who drink City of Rockville water, especially those who may not have received this notice directly, (e.g., in apartments, nursing homes, schools and businesses). You can do this by printing and posting this report in a public place and/or by distributing copies or the web address. Visit [www.rockvillemd.gov/AgendaCenter](http://www.rockvillemd.gov/AgendaCenter) for upcoming meetings of the Mayor and Council. The city provides numerous opportunities for public participation. For more details, visit [www.rockvillemd.gov/mayorcouncil](http://www.rockvillemd.gov/mayorcouncil).

*This report is required by the United States Environmental Protection Agency and the Maryland Department of the Environment.*

The table to the left lists all of the drinking water contaminants that were detected during calendar year 2020. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in calendar year 2020.		
<b>Definitions Used in this Report</b>	<b>TERM</b>	<b>DEFINITION</b>
	<b>Unit Descriptions:</b>	
<b>TERM</b>	<b>DEFINITION</b>	
<b>NTU</b>	Nephelometric Turbidity Unit	
<b>ppm</b>	Parts per million, or milligrams per liter (mg/L). 1 ppm is similar to 1 ounce in 7,350 gallons of water.	<b>MRDL</b>
<b>ppb</b>	Parts per billion, or micrograms per liter (µg/L). 1 ppb is similar to 1 ounce in 7,350,000 gallons of water.	
<b>NA</b>	Not Applicable	<b>MRDLG</b>
<b>ND</b>	Not Detected (by a test procedure)	
	<b>Important Drinking Water Definitions:</b>	
<b>MCL</b>	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.	<b>AL</b>
		<b>TT</b>
		Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.