

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 Since then, an average of 5 million gallons per day of raw (untreated) water is withdrawn from the Potomac River, treated at the plant and distributed to the city's water customers.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 If algae blooms are present in the raw water withdrawn from the river, it is treated with potassium permanganate.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 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

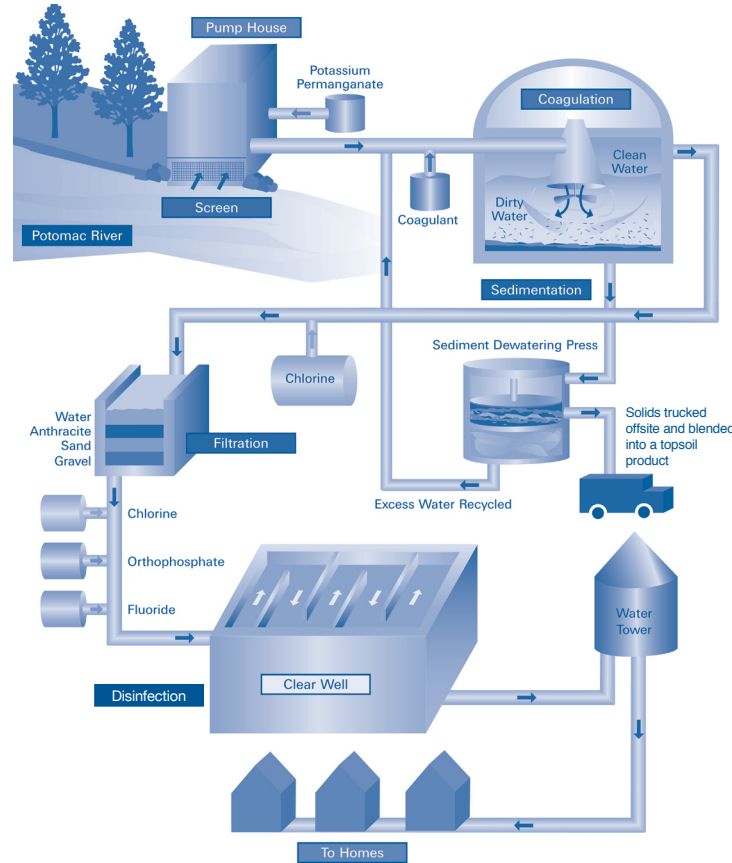
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining contaminants.

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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Dear Valued Customer,

We've had another successful year! Rockville's drinking water met or exceeded all federal health and safety regulation limits once again in 2016. We invite you to review this water quality report for details about the source, treatment, distribution, safety and quality of the city's drinking water.

It has taken 13 years from inception to completion, but the city has successfully completed a complex, \$8 million construction project to improve the ability of our Water Treatment Plant to meet increasingly stringent water quality regulations and reliably produce safe and high-quality drinking water. On March 21, the plant began full-time use of ferric chloride to coagulate and remove organic compounds from the river water. This improved our 59-year-old plant's ability to consistently produce high-quality drinking water that meets federal standards for maximum contaminant levels and disinfection byproducts.

Elsewhere in our water system, a \$3 million construction project is underway to rehabilitate the 50-year-old Hunting Hill water storage tank near Lakewood Country Club and the 54-year-old tank on Lockett Street near Beall Elementary School. These tanks have a combined capacity of 11 million gallons. Construction includes safety upgrades, repairs and/or replacement of the steel roof supports, interior and exterior work to remove old paint and repaint the tanks, and adding a wireless communications antennae-mounting structure to the Hunting Hill tank. The improvements will significantly extend the life of the tanks, resulting in long-term cost savings for city taxpayers. The projects are expected to be completed by year's end.

We continue to pay close attention to water quality throughout Rockville's water system. The water storage tanks have aeration and mixing systems to maintain water quality and, if necessary, we boost the disinfectant at the tanks to maintain a protective level throughout the system. The city's unidirectional flushing (UDF) program, conducted annually from April through October, is an excellent, water-efficient method of cleaning water distribution pipes, which improves water quality and restores the pipe's capacity to deliver water. By opening and closing water valves and fire hydrants in a certain sequence, the process produces enough water velocity to scour the pipes, removing sediment, biofilm, corrosion products and tuberculation from the system. Not only is UDF more effective than conventional flushing, but it uses, on average, about 40 percent less water.

We invite you to learn more about Rockville's drinking water at www.rockvillemd.gov/water and thank you for your continued support of our mission to maintain the reliability of the city's water system and provide safe, 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 2016 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 부탁드립니다.

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.

CITY OF ROCKVILLE

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City of Rockville
Get Into It

Department of Public Works

Water Quality Data Table

DETECTED REGULATED CONTAMINANTS	MCLG OR MRDLG	MCL, TT OR MRDL	TEST RESULTS	RANGE LOW	RANGE HIGH	SAMPLE YEAR	IS THIS A VIOLATION?	TYPICAL SOURCE
WATER TREATMENT PLANT PERFORMANCE								
Turbidity (NTU) ¹	N/A	TT=0.3	0.02	0.02	0.03	2016	No	Soil runoff
Residual Chlorine (ppm)	4	TT>0.2	1.9	1.3	2.6	2016	No	Water additive to control microbes
INORGANIC CONTAMINANTS								
Barium (ppm)	2	2	0.038	NA	NA	2016	No	Erosion of natural deposits, discharge of drilling wastes, discharge from metal refineries
Fluoride (ppm)	4	4	0.53	0.42	0.64	2016	No	Water additive which promotes strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
Nitrate (ppm), measured as nitrogen	10	10	1.50	NA	NA	2016	No	Erosion of natural deposits, runoff from fertilizer use, leaching from septic tanks, sewage
WATER DISTRIBUTION SYSTEM								
Total Coliform % positive samples per month	0	5	0 ²	0	0	2016	No	Naturally present in the environment
² Minimum sampling frequency is 50 samples per month. 605 total samples tested.								
DISINFECTANTS & DISINFECTION BYPRODUCTS								
Residual Chlorine (ppm), measured as free chlorine	4.0	4.0	1.0 ³	0.3	1.4	2016	No	Water additive to control microbes
Total Trihalomethanes (ppb)								
Stage 2	NA	80	76.0 ⁴	17.2	129.0	2016	No	Byproduct of drinking water disinfection
Haloacetic Acids (ppb)								
Stage 2	NA	60	37.0 ⁴	10.1	43.6	2016	No	Byproduct of drinking water disinfection
³ Annual average. ⁴ Highest locational running annual average.								
METALS @ CONSUMER TAPS								
Copper (ppm)	1.3	1.3 (AL)	0.043	0.007	0.100	2016	No	Corrosion of household plumbing systems, erosion of natural deposits
Lead (ppb)	0	15 (AL)	0.3	ND	6.4	2016	No	Corrosion of household plumbing systems, erosion of natural deposits

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 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 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 2016, Rockville purchased about 59.8 million gallons of water (approximately 3.6 percent 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.

For more information, please contact:

Glenn Maggard, Water Plant Superintendent
 Phone: 240-314-8556 • Email: gmgaggard@rockvillemd.gov
 This Drinking Water Quality Report is available on the city's website and posted online at www.rockvillemd.gov/annualwaterquality2017. 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.

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 2016. 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 2016. The EPA and MDE allow us to monitor for certain contaminants less than once per year because the concentration of these contaminants does not change frequently.

Definitions Used in this Report

Unit Descriptions:

TERM	DEFINITION
NTU	Nephelometric Turbidity Unit
ppm	Parts per million, or milligrams per liter (mg/L). 1 ppm is similar to 1 penny in \$10,000.
ppb	Parts per billion, or micrograms per liter (µg/L). 1 ppb is similar to 1 penny in \$10,000,000.
NA	Not Applicable
ND	Not Detected (by a test procedure)

Important Drinking Water Definitions:

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 ensure a margin of safety for sensitive individuals.

MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which no health risk is known or expected. MRDLGs do not reflect the benefits of using disinfectants to control microbial contaminants.
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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
MRDL	Maximum Residual Disinfectant Level: 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.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.