



Annual Drinking Water Quality Report

Publication date:
July 1, 2011

City of Rockville • Department of Public Works

PWS ID No. 00150003

Dear Valued Customer,

The City of Rockville is committed to providing the vital, life-sustaining resource of water, and has been serving you since 1958.

We provide water to approximately 46,500 people 24 hours a day, seven days a week, and we are committed to quality service and delivering water that meets all federal health and safety regulations.

In fact, our goal is to exceed the stringent federally-mandated standards that are required for water service providers. We continuously monitor and test our water quality. We actually perform more water tests than required by federal and state law. We do this because the health and safety of our customers, who rely on clean, safe water is important to us.

In the 2010 Citizen Survey, residents surveyed indicated their concern for the quality of the City's water. The Annual Water Quality Report provides important water quality information. We welcome your questions and comments as we take our role as stewards of public health seriously, and maintain our commitment to our customers.

Rockville did not have any violations in 2010 despite a series of challenges. Rockville's main water transmission line suffered two breaks within a few days last July, and forced the City to shut down its Water Treatment Plant for 87 days.

During that time, the City was able to continue quality water service thanks to Rockville's partnership with the Washington Suburban Sanitary Commission (WSSC). That is why you see water quality data for WSSC from July 6 through Oct. 6, 2010, included in this report.

While the decision to close the Water Treatment Plant was difficult, it was also the most prudent to gain confidence in continued water service and to reduce the possibility for more water main breaks.

We have instituted a long-term strategic plan that will support our goal to provide quality water at a reasonable cost even as costs increase to comply with regulations, renew aging infrastructure and provide adequate fire flow.

Thank you for your support. We look forward to serving you and ensuring safe, reliable drinking water.

Craig Simoneau, Director of Rockville Public Works

Is my water safe?

The City of Rockville's drinking water is safe as set forth in the regulations set by the United States Environmental Protection Agency (EPA) and adopted and enforced by the Maryland Department of the Environment (MDE). For the 2010 calendar year, the City met all water quality requirements and did not have any drinking water violations.

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 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 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; and

Water Quality Data Table

CONTAMINANTS	MCLG OR MRDLG	MCL, TT OR MRDL	TEST RESULTS	RANGE LOW	RANGE HIGH	SAMPLE YEAR	IS THIS A VIOLATION?	TYPICAL SOURCE
CITY OF ROCKVILLE WATER TREATMENT PLANT PERFORMANCE								
Turbidity (NTU) ¹	N/A	TT=0.3	0.05	0.02	0.29	2010	No	Soil runoff
¹ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our turbidity results are 100% < 0.3 NTU; a value less than 95% constitutes a turbidity violation.								
Residual Chlorine (ppm)	4	TT>0.2	2.2	0.8	3.9	2010	No	Water additive to control microbial contaminants
INORGANIC CONTAMINANTS								
Barium (ppm)	2	2	0.035	NA	NA	2010	No	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Fluoride (ppm)	4	4	0.9	0.4	1.1	2010	No	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	1.7	NA	NA	2010	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
RADIONUCLIDES								
Gross Beta (pCi/L)	0	50	4	NA	NA	2010	No	Decay of natural and man-made deposits
ORGANIC CONTAMINANTS								
Pentachlorophenol (ppb)	0	1.0	0.15	NA	NA	2010	No	Discharge from wood preserving factories
WASHINGTON SUBURBAN SANITARY COMMISSION (POTOMAC FILTER PLANT)^A								
INORGANIC CONTAMINANTS								
Barium (ppm)	2	2	0.0369 (average)	0.0306	0.0484	2010	No	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Fluoride (ppm)	4	4	0.547 (average)	0.135	0.88	2010	No	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.357 (average)	0.268	0.714	2010	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage
^A WSSC test results for the period July 6 - Oct. 6, 2010. This period corresponds to the time frame when all water supplied to Rockville was purchased from WSSC.								
RADIONUCLIDES								
Radium 226 and Radium 228 (combined) (pCi/L)	0	5	2.1 ^B	NA	NA	2010	No	Erosion of natural deposits
^B WSSC test is for Radium 228 only; There was no test result for Radium 226 from July 6-Oct. 6								
ORGANIC CONTAMINANTS								
Dalapon (ppb)	200	200	1.23	NA	NA	2010	No	Runoff from herbicide used on rights of way
CITY OF ROCKVILLE WATER DISTRIBUTION SYSTEM								
Total Coliform, % positive samples per month	0	5	1 ²	0	4	2010	No	Naturally present in the environment
² Seven positive samples out of 688 total samples tested. Minimum sampling frequency is 50 samples per month.								
DISINFECTANTS & DISINFECTANT BYPRODUCTS³								
Residual Chlorine (ppm), measured as free chlorine	4.0	4.0	1.1 ⁴	0.04	2.2	2010	No	Water additive to control microbial contaminants
Total Trihalomethanes (ppb)	NA	80 ⁵	64.9 ⁶	3.2	78.2	2010	No	Byproduct of drinking water chlorination
Haloacetic Acids (ppb)	NA	60 ⁵	34.1 ⁶	6.6	64.7	2010	No	Byproduct of drinking water chlorination
³ There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.								
⁴ Annual average. ⁵ Running annual average. ⁶ Highest running annual average.								
METALS @ CONSUMER TAPS								
Copper (ppm)	1.3	1.3 (AL)	0.17	0.032	0.57	2010	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	0	15 (AL)	2.7	<2	12	2010	No	Corrosion of household plumbing systems; erosion of natural deposits

- 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 Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Do I need to take special precautions?

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, and 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 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 Sanitation Commission (WSSC). From July 12 through Oct. 7, 2010, Rockville's water plant was shut down in order to make repairs, as well as inspect and assess critical water pipelines. In 2010, Rockville purchased about 568.2 million gallons of water from WSSC, which also receives its water from the Potomac River.

Source water assessment and its availability

The Maryland Department of the Environment (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 410-537-3702. For more information on the Maryland Source Water Protection Program, go to www.mde.state.md.us/Programs/WaterPrograms/Water_Supply/sourcewaterassessment/index.asp.

For more information please contact:

Vernon Simmons, Water Plant Superintendent
Phone: 240-314-8556 • E-mail: vsimmons@rockvillemd.gov

Our primary method of distributing this report is through Rockville Reports, the City's monthly newsletter. Please share this information with all other people who drink City of Rockville water, especially those who may not have received this notice directly (for example, those who live in apartments, nursing homes, or to schools and businesses). You can do this by posting this Drinking Water Quality Report in a public place or by distributing copies. This Drinking Water Quality Report will also be posted online at www.rockvillemd.gov.

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 2010. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the date presented in this table is from testing done in calendar year 2010. The EPA and MDE allows us to monitor for certain contaminants less than once per year because the concentration of these contaminants do not change frequently

Definitions Used in this Report

Unit Descriptions are as follows:

TERM DEFINITION

NTU	Nephelometric Turbidity Unit
ppm	Parts per million, or milligrams per liter (mg/L). 1 ppm is like one drop in 10 gallons of water.
ppb	Parts per billion, or micrograms per liter (µg/L). 1 ppb is like one drop in 10,000 gallons of water.
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.

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-1990's 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 water 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 the drinking water meets Safe Drinking Water Act standards. Once treated, the water is sent through a series of underground water lines and water storage tanks to your faucet.

The river water is treated to remove suspended sediments, algae, parasites, bacteria and metals through the following processes.

Screen

Water from the Potomac is pumped through a screen to remove large debris such as sticks, leaves and rocks. If algal 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

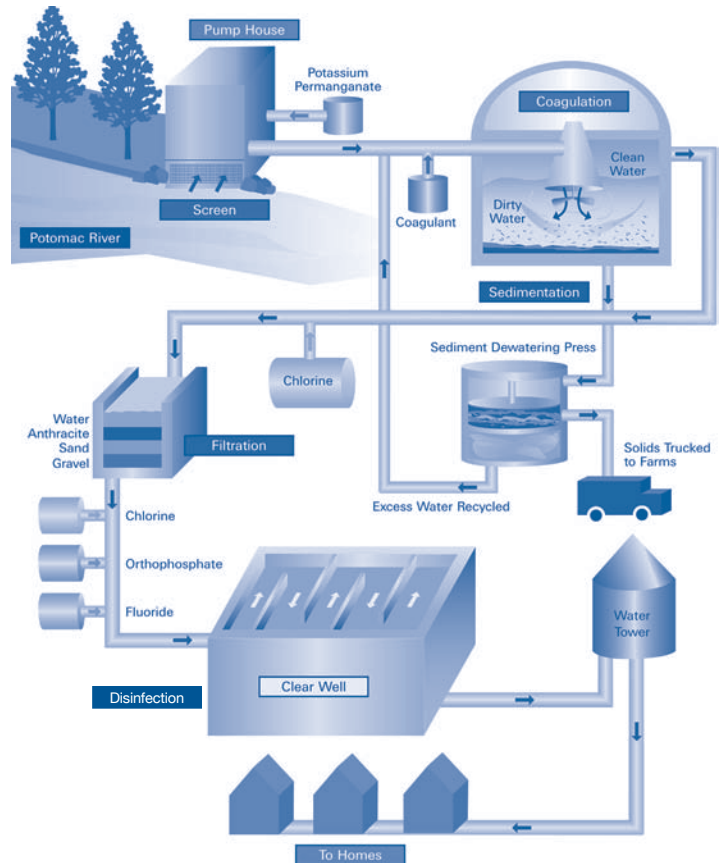
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining pollutants.

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

The treated water is stored in three 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 potential harmful chemicals, bacteria and residual chlorine.



“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.

CITY OF ROCKVILLE

111 Maryland Avenue, Rockville, MD 20850 • 240-314-8500 • www.rockvillemd.gov