

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 Since then, an average of 5 million gallons per day of raw (untreated) water is withdrawn from the Potomac River, treated at the water plant and distributed to the City's water customers.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 If algae blooms are present in the raw water withdrawn from the river, it is treated with potassium permanganate.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

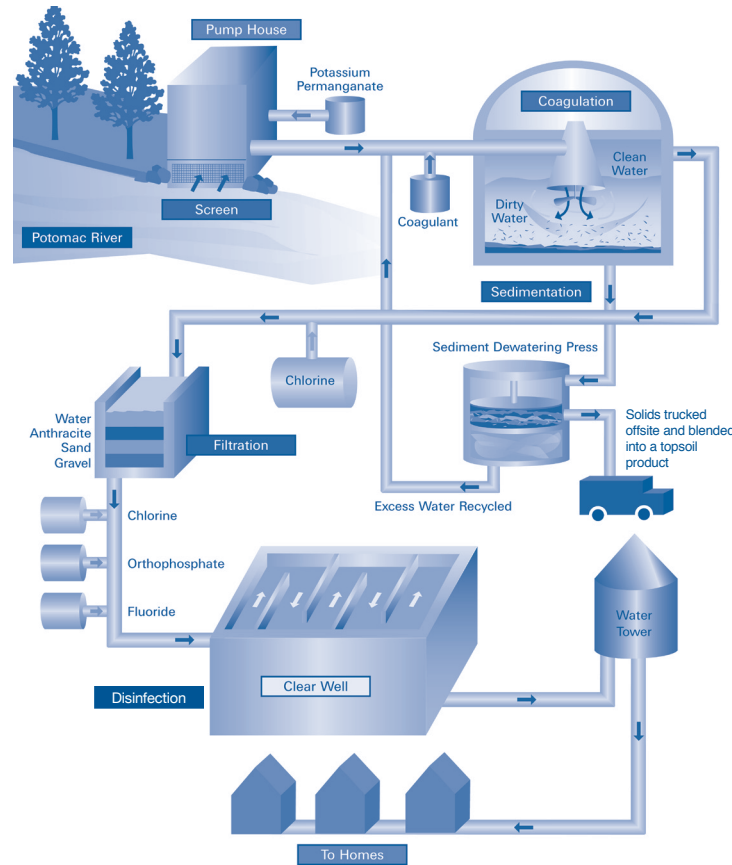
Water is passed through a dual media (sand and anthracite) filter, which removes many remaining contaminants.

### 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

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 potentially harmful contaminants, bacteria and residual chlorine.



# Annual Drinking Water Quality Report

Publication date:  
**July 1, 2014**

City of Rockville • Department of Public Works

PWS ID No. 00150003

Dear Valued Customer,

Once again in 2013, the City of Rockville met or exceeded all our water quality goals. We invite you to take a moment to review this water quality report for more information about the source, treatment, distribution, safety and quality of Rockville's drinking water.

Continuing our commitment to maintaining a sustainable and resilient water system, Rockville is investing \$6.8 million to upgrade our 56-year-old water treatment plant. This includes adding new chemical feed systems, filter bed cleaning equipment and additional solids treatment to help ensure reliability and compliance with new and more stringent federal regulations. Construction began in December and is scheduled to be completed by summer 2015.

In June, the water treatment plant was honored at the annual American Water Works Association (AWWA) conference in Boston with the "Directors Award of Recognition" from the Partnership for Safe Water. The partnership is a voluntary program developed by six national drinking water organizations, including the United States Environmental Protection Agency and AWWA. It focuses on improving the quality and safety of water produced at water treatment plants by optimizing operations.

The Directors Award is an outstanding achievement, presented for successfully completing a comprehensive self-assessment report, a rigorous peer review of water treatment operations and performance, and an action plan for continuous improvement. Our plant operators showed extraordinary initiative and leadership by enrolling in the partnership in 2011 with the goal to provide additional safety measures to our customers beyond current regulatory requirements.

Our plant upgrades and efforts to optimize plant operations will ensure that future generations of Rockville water customers will have healthy drinking water at a reasonable cost.

Thank you for your continued support of the City's commitment to providing drinking water quality and service that is safe and reliable and contributes to the overall quality of life in Rockville.

Craig 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 2013 calendar year, the City's water met or exceeded all water quality requirements, but incurred one reporting violation on Oct. 10, because the City did not file a triennial lead and copper report to MDE within the required time. The City submitted the report to MDE and was returned to compliance on April 4, 2014. All lead and copper samples were below the maximum contaminant level goal and all results were properly reported to the sample tap locations/owners in accordance with the Lead and Copper Rule.

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; and

***"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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## 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  |
|--|---------------|-----------------|-------------------|-----------|------------|-------------------|----------------------|---|
| <b>WATER TREATMENT PLANT PERFORMANCE</b>   |               |                 |                   |           |            |                   |                      |   |
| Turbidity (NTU) <sup>1</sup>   | N/A           | TT=0.3          | 0.04              | 0.01      | 0.10       | 2013              | No                   | Soil runoff   |
| Residual Chlorine (ppm)  | 4             | TT>0.2          | 2.0               | 1.0       | 3.8        | 2013              | No                   | Water additive to control microbes  |
| <b>INORGANIC CONTAMINANTS</b>  |               |                 |                   |           |            |                   |                      |   |
| Arsenic (ppm)  | 0             | 0.01            | ND                | NA        | NA         | 2013              | No                   | Erosion of natural deposits; runoff from orchards or glass and electronic production wastes                               |
| Barium (ppm)   | 2             | 2               | 0.041             | NA        | NA         | 2013              | No                   | Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries                                |
| Chromium (ppm)   | 0.1           | 0.1             | ND                | NA        | NA         | 2013              | No                   | Erosion of natural deposits; discharge from steel and pulp mills  |
| Fluoride (ppm)   | 4             | 4               | 0.48              | 0.34      | 0.58       | 2013              | No                   | Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories |
| Nitrate (ppm)  | 10            | 10              | 1.3               | NA        | NA         | 2013              | No                   | Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage                               |
| <b>ORGANIC CONTAMINANTS</b>  |               |                 |                   |           |            |                   |                      |   |
| Di (2-ethylhexyl) phthalate (ppb)  | 0             | 6               | 2.4               | NA        | NA         | 2013              | No                   | Discharge from rubber and chemical factories  |
| Pentachlorophenol (ppb)  | 0             | 1               | 0.15              | NA        | NA         | 2013              | No                   | Discharge from wood preserving factories  |
| <b>WATER DISTRIBUTION SYSTEM</b>   |               |                 |                   |           |            |                   |                      |   |
| Total Coliform % positive samples per month  | 0             | 5               | 0 <sup>2</sup>    | 0         | 0          | 2013              | No                   | Naturally present in the environment  |
| <sup>2</sup> 609 total samples tested. Minimum sampling frequency is 50 samples per month.   |               |                 |                   |           |            |                   |                      |   |
| <b>DISINFECTANTS <sup>3</sup> &amp; DISINFECTANT BYPRODUCTS <sup>4</sup></b>   |               |                 |                   |           |            |                   |                      |   |
| Residual Chlorine (ppm), measured as free chlorine   | 4.0           | 4.0             | 1.1 <sup>5</sup>  | 0.3       | 2.0        | 2013              | No                   | Water additive to control microbes  |
| Total Trihalomethanes <sup>4</sup> (ppb)   |               |                 |                   |           |            |                   |                      |   |
| Stage 1 (Jan-Sept)   | NA            | 80 <sup>6</sup> | 51.2 <sup>7</sup> | 12.8      | 77.1       | 2013              | No                   | Byproduct of drinking water disinfection  |
| Stage 2 (Oct-Dec)  | NA            | 80              | NA                | 49.7      | 70.6       | 2013              | No                   | Byproduct of drinking water disinfection  |
| Haloacetic Acids <sup>4</sup> (ppb)  |               |                 |                   |           |            |                   |                      |   |
| Stage 1 (Jan-Sept)   | NA            | 60 <sup>6</sup> | 36.1 <sup>7</sup> | 8.1       | 36.3       | 2013              | No                   | Byproduct of drinking water disinfection  |
| Stage 2 (Oct-Dec)  | NA            | 60              | NA                | 18.5      | 44.8       | 2013              | No                   | Byproduct of drinking water disinfection  |
| <sup>3</sup> There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.  |               |                 |                   |           |            |                   |                      |   |
| <sup>4</sup> On October 1, 2013 our water distribution system transitioned from the Stage 1 Disinfection Byproducts (DBP) Rule to the Stage 2 DBP Rule. The Stage 2 DBP Rule has different monitoring and reporting requirements than the Stage 1 DBP Rule. Stage 1 DBP data shown for Total Trihalomethanes and Haloacetic Acids reflect the system-wide averages of each contaminant group and the detected ranges for the system. The Stage 2 DBP data reflect the range of monitoring results from all Stage 2 monitoring locations for the fourth quarter of 2013. Stage 2 DBP data collection and reporting will continue hereafter. |               |                 |                   |           |            |                   |                      |   |
| <sup>5</sup> Annual average. <sup>6</sup> Running annual average. <sup>7</sup> Highest running annual average.   |               |                 |                   |           |            |                   |                      |   |
| <b>METALS @ CONSUMER TAPS</b>  |               |                 |                   |           |            |                   |                      |   |
| Copper (ppm)   | 1.3           | 1.3 (AL)        | 0.082             | 0.009     | 0.110      | 2013 <sup>8</sup> | No                   | Corrosion of household plumbing systems; erosion of natural deposits  |
| Lead (ppb)   | 0             | 15 (AL)         | ND                | NA        | NA         | 2013 <sup>8</sup> | No                   | Corrosion of household plumbing systems; erosion of natural deposits  |

<sup>8</sup> Copper and lead testing is required every three years, with the next testing due in 2016.

- 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. 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 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 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](http://www.epa.gov/safewater/lead).

The table to the left lists all of the drinking water contaminants that were detected during calendar year 2013. 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 2013. 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 are as follows:*

| TERM | DEFINITION  |
|------|---|
| NTU  | Nephelometric Turbidity Unit  |
| ppm  | Parts per million, or milligrams per liter (mg/L).<br>1 ppm equals one drop in 10 gallons of water.     |
| ppb  | Parts per billion, or micrograms per liter (µg/L).<br>1 ppb equals 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.

### 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). In 2013, Rockville purchased about 27.9 million gallons of water (approximately 2 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 410-537-3714. 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/annualwaterquality2014](http://www.rockvillemd.gov/annualwaterquality2014). Paper copies are also available in City of Rockville facilities including City Hall and the 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, (for example, those who live in apartments, nursing homes, or to 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.*