



# Frederick County Division of Utilities & Solid Waste Management Annual Water Quality Report

2013 Summary • Prepared for Customers of Frederick County Water Systems



The Frederick County Division of Utilities and Solid Waste Management is pleased to present this year's Annual Water Quality Report. Once a year, we present this report to our customers to demonstrate that our drinking water meets or surpasses all State and Federal drinking water standards. This report includes data collected during calendar year 2013 and contains valuable information that we hope you will find interesting and helpful. We want you to understand the efforts and dedication of our employees who work around the clock to provide the reliable and high quality drinking water that our customers have come to expect.

## SOURCES OF WATER

Sources of drinking water, both tap and bottled, include rivers, streams, ponds, reservoirs, springs, and wells. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. The majority of the County's water system customers receive treated water from surface water supplies, primarily the Potomac River. The remainder of our customers receive treated ground water from deep well sources.

## SOURCE WATER PROTECTION

The Maryland Department of the Environment has completed source-water assessments for each of the County's water supplies. These assessments are used to implement source-water protection plans, which identify and prevent potential sources of contamination from entering your drinking water supply. More information on these assessments can be found on-line at [www.FrederickCountyMD.gov/index.asp?NID=2026](http://www.FrederickCountyMD.gov/index.asp?NID=2026) or by contacting our offices at (301) 600-1825.

In 2013, Frederick County produced a total of 2.27 billion gallons of water at 13 treatment plants. Most (89%) was produced at the New Design Road Plant which uses the Potomac River as its source of water. The remainder was produced at numerous treatment plants using groundwater sources.

## Contents

### Page 1

- Introduction
- Sources of Water
- Source Water Protection

### Page 2

- Testing Requirements
- Vulnerable Populations

### Page 3

- Terms, Units & Abbreviations
- Customers with Multiple Sources
- Compliance with SDWA Requirements

### Page 4

- Information on Lead
- Useful Information
- Additional Resources

### Insert

- Water Quality Data Summary



We are pleased to report that your drinking water is safe and meets Federal and State requirements.

This detailed report contains specific information about your water quality and what the analyses mean. In addition to the test results shown on the enclosed data table, testing has been performed on well over 100 various regulated and unregulated contaminants. These contaminants, which include volatile and synthetic organic chemicals (industrial chemicals and herbicides/pesticides), metals, other inorganic, and radiological compounds are not listed because they were not detected. Specific information on this additional testing may be obtained by contacting the Frederick County Division of Utilities and Solid Waste Management.

If you have any questions about this report or concerning your water utility, please contact Mark Schweitzer, Regulatory Compliance Department Head, at (301) 600-1825, Monday through Friday, between the hours of 7:30 a.m. and 4:30 p.m.

We want our valued customers to be informed about their water utility. Periodically, issues pertaining to your water system are addressed at regularly scheduled Board of County Commissioners' meetings. Meeting schedules with agendas and other pertinent information concerning your water system can be found online at the Frederick County Government website:

[www.FrederickCountyMD.gov](http://www.FrederickCountyMD.gov)

\*\*\*\*

Please e-mail your questions to:  
[wsops@FrederickCountyMD.gov](mailto:wsops@FrederickCountyMD.gov)

## TESTING REQUIREMENTS

The Frederick County Division of Utilities and Solid Waste Management and the Maryland Department of the Environment routinely monitor the constituents in your drinking water according to Federal and State laws. This report summarizes the results of our monitoring for the period of January 1, 2013 to December 31, 2013. Some parameters are not monitored each year and will be noted as such in the data table.

## VULNERABLE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as individuals 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 from their health care providers about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline. Call (800) 426-4791.

## SPECIFIC WATER QUALITY DATA

The data table that accompanies this pamphlet provides specific water quality information regarding your water supply. It also includes other information that is related to the operation of your community's water supply system. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old.



## CUSTOMERS WITH MULTIPLE WATER SOURCES

Some of our water system customers receive water from multiple sources of supply. This typically occurs when water systems located next to each other share water between their respective distribution systems. Because the flow and movement of water in the distribution system can be non-uniform, it is difficult to accurately identify the proportion of water that comes from each water system.

If your community is supplied by multiple sources of water, you may find data from more than one water source in this report. Your specific water quality can be a combination of the multiple sources. Regardless of how many sources of water the water system uses, each source met or exceeded the standards set by the EPA.

## COMPLIANCE WITH SAFE DRINKING WATER ACT REQUIREMENTS

Last year, as in years past, your tap water met all EPA and state drinking water health standards. Frederick County vigilantly safeguards its water supplies and once again we are proud to report that your water supply has not exceeded a maximum contaminant level or any other water quality standard.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals, and radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.



MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

## TERMS, UNITS AND ABBREVIATIONS

**PPM** - Parts per Million - Analogous to one penny in \$10,000.

**PPB** - Parts per Billion - Analogous to one penny in \$10,000,000.

**PPT** - Parts per Trillion - Analogous to one penny in \$10,000,000,000.

**pCi/L** - Picocuries per Liter - A measure of radiation.

**TT** - Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**AL** - Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**NTU** - Nephelometric Turbidity Unit - A measure of the clarity of water.

**SDWA** - Safe Drinking Water Act - Federal Law which regulates the water quality for public water supplies.

**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 allow for a margin of safety.

**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.

**ND** - Non-Detected - Means not detectable (at lowest level for which contaminant can be measured).

## ADDITIONAL INFORMATION AND RESOURCES

For more information on your water supply or the information contained in this report you may want to contact the following agencies:

Frederick County Division of Utilities & Solid Waste Management  
(301) 600-1825

Maryland Department of the Environment  
(410) 537-3000  
(800) 633-6101

U. S. Environmental Protection Agency  
Safe Drinking Water Act Hotline  
(800) 426-4791



Division of Utilities & Solid Waste Management Emergency Telephone Numbers

Monday thru Friday  
7:00 AM - 3:30 PM  
(301) 600-2187

Weekends, Holidays, and After-Hours  
(301) 600-2194

***The Frederick County Commissioners and the Division of Utilities and Solid Waste Management strive to provide our customers with a safe, uninterrupted water supply. We hope that all of our customers recognize the need to protect our most precious resource, our community water supply.***

## An Informational Statement from the EPA on 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 Division of Utilities and Solid Waste Management 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 Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## Household Leaks

According to the EPA, easily repaired household leaks account for more than one trillion gallons of water wasted each year in the United States. Water leaking from dripping faucets, showerheads, and worn toilet flappers can waste 10,000 gallons per year in the average home. Many of these leaks are easily repaired and can result in savings to a homeowner's water bill. Finding and fixing leaks can be a simple task.

**Check for leaks:** Look for dripping faucets, showerheads and fixture connections. Check toilets by placing a few drops of food coloring in the tank at the back of the toilet and wait 10 minutes to see if the color shows up in the bowl. If there is color there, the toilet flapper likely needs replacement.



**Twist and tighten pipe connections:** If your showerhead is dripping, make sure there is a tight connection between the showerhead and pipe stem. It may just need tightening.

**Replace the fixture if necessary:** If it is time to replace the fixture, look for water saving fixtures such as those that are EPA WaterSense® certified. Some of these fixtures may use 20 percent less water.

## Electronic Report Distribution

The Division of Utilities and Solid Waste Management continues to distribute the annual water quality report electronically by providing a direct web link to their report on each customers quarterly billing statement. This results in significant savings each year.

However, if you or someone you know are unable to view an electronic copy of this report, a paper copy can be requested. Simply contact us at (301) 600-1825 and we will mail one to you.



Your water source came from two (2) deep wells located in the Bradford Estates Development. These wells withdraw water from the Marburg Schist Formation. The Maryland Department of the Environment (MDE) completed the Source Water Assessment for the Bradford Estates community water supply in 2002. Should you care to obtain a copy of this report, the Frederick County Library has a copy, MDE has several, and the Division of Utilities and Solid Waste Management has placed a copy on the Frederick County website. MDE has determined that the Bradford Estates water supply is susceptible to nitrate, radon, and synthetic organic compounds. This water supply is not susceptible to other inorganic compounds, other radiological contaminants, volatile organic compounds, or microbiological contaminants.

### REGULATED CONTAMINANTS DETECTED

#### Bradford Estates Water Treatment Plant

Parameter	Units	MCLG	MCL	Reported Level <sub>1</sub>	Range <sub>2</sub>	Typical Sources for Detected Contaminants
<b>Alpha Radionuclides</b> July 2008	pCi/l	0	15	1.78		Erosion of natural deposits
<b>Barium</b> April 2011	PPM	2	2	0.077		Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries
<b>Combined Radium</b> July 2008	pCi/l	0	5	0.653		Erosion of natural deposits
<b>Fluoride</b> August 2011	PPM	4	4	0.66		Erosion of natural deposits; Water additive which promotes strong teeth
<b>Nitrate</b> November 2013	PPM	10	10	6.7	5.3 – 7.1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

1 - Reported Level is the most recent value reported to MDE in 2013 unless otherwise noted.

2 - Range shows highest and lowest reported test values. Range is only reported if two or more samples were tested.

Note: Nitrate average for calendar year 2013 was 6.3 ppm based upon 53 samples. Nitrate reduction began on September 21, 2000.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six (6) 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 for advice from your health care provider.

The Bradford Estates System was issued a monitoring violation for nitrate under the Safe Drinking Water Act. Required reports were not received at the Maryland Department of Environment prior to the reporting deadline for the first quarter of 2013. This was due to an administrative error and did not impact water quality in any way.

### UNREGULATED CONTAMINANTS DETECTED

#### Bradford Estates Water Treatment Plant

Parameter	Units	MCLG	MCL	Reported Level <sub>1</sub>	Sample Date	Range <sub>2</sub>	Typical Sources for Detected Contaminants
<b>Sodium</b>	PPM	None	None	70.1	August 2011		Erosion of natural deposits

1- Reported Level is the most recent value reported to MDE.

2- Range shows highest and lowest reported test values. Range is only reported if two or more samples were tested.

**LEAD AND COPPER RULE**

## Customer Tap

Parameter	Units	MCLG	AL	Reported Level <sub>1</sub>	Range <sub>2</sub>	Sites Over Action Limit	Typical Sources for Detected Contaminants
<b>Lead</b> 2011	PPB	0	15	ND (< 5)	ND - ND	0	Corrosion of household plumbing systems; erosion of natural deposits
<b>Copper</b> 2011	PPM	1.3	1.3	ND (< 0.250)	ND - ND	0	Corrosion of household plumbing systems; erosion of natural deposits

1 - Reported Level is 90th percentile value.

2 - Range is only reported if two or more samples were tested.

**REGULATED CONTAMINANTS DETECTED**

## Bradford Estates Distribution System

Parameter	Units	MCLG	MCL	Reported Level <sub>1</sub>	Range <sub>2</sub>	Typical Sources for Detected Contaminants
<b>Fluoride</b>	PPM	4	4	0.6	0.4 – 0.9	Erosion of natural deposits; Water additive which promotes strong teeth
<b>Chlorine</b>	PPM	4.0	4.0	1.4	0.5 – 2.1	Water additive used to control microbes
<b>Total Haloacetic Acids</b> August 2013	PPB	NA	60	8.1		By-product of drinking water chlorination
<b>Total Trihalomethanes</b> August 2013	PPB	NA	80	36.2		By-product of drinking water chlorination

1 - Annual average for 2013.

2 - Range is only reported if two or more samples were tested.

**BACTERIOLOGICAL TESTING TABLE**

Parameter	Unit	MCLG	MCL	Level Found	Notes <sub>1</sub>
<b>Total Coliform</b>	% Positive	0	1 positive monthly sample/month	0	0 positive samples out of 12 samples tested. Minimum sampling frequency is 1 sample per month.
<b><i>E. coli</i> Bacteria</b>	% Positive	0	1 positive monthly sample/month	0	0 positive samples out of 12 samples tested. Minimum sampling frequency is 1 sample per month.

1 - Bacteriological samples are collected from sites on the distribution system.