Frederick County Division of Utilities and Solid Waste Management

Annual Water Quality Report

2016 Summary • Prepared for Customers of Frederick County Water Systems

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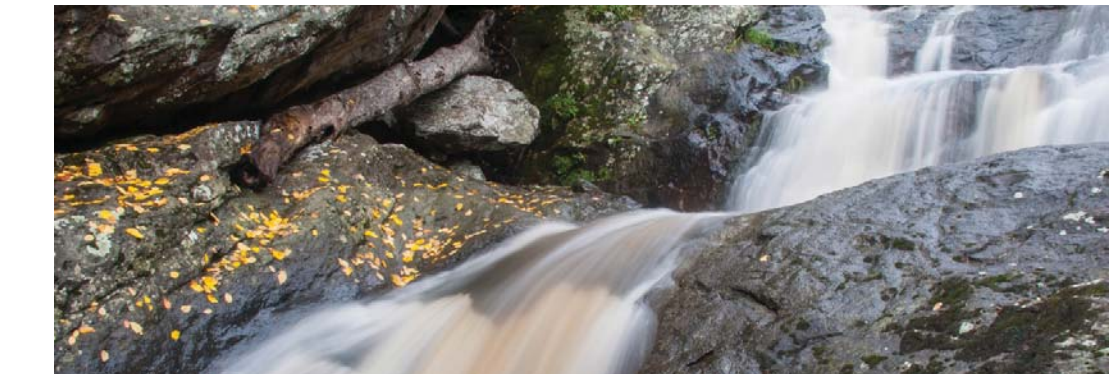

The Frederick County Division of Utilities and Solid Waste Management is pleased to present this year's Annual Water Quality Report. Once a year, we present this report to our customers to demonstrate that our drinking water meets or surpasses all State and Federal drinking water standards. This report includes data collected during calendar year 2016 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 or by contacting our offices at (301) 600-1825.

In 2016, Frederick County produced a total of 2.37 billion gallons of water at 13 treatment plants. Most (91%) 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.

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 Terri Snyder-Kolovich, Regulatory Compliance Department Head, at (301) 600-2945, 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, legislative issues pertaining to your water system may be addressed at regularly scheduled County Council 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

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Please e-mail your questions to:

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, 2016 to December 31, 2016. 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 and 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 and 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 Division of Utilities and Solid Waste Management strives 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.

SOURCES OF LEAD IN DRINKING WATER

Water is lead-free when it leaves the treatment plant, but lead can be released when the water comes in contact with pipes and plumbing fixtures that contain lead.

Lead Solder - This connects the piping. In 1987, lead solder was banned from use in household plumbing. If your home was built prior to 1987, it may contain lead solder.

Brass Faucets, Valves, or Fittings - Almost all faucets, valves, and fittings have brass components. Until 2014, brass faucets and fittings sold in the U.S. and labeled as 'lead free' could contain up to 8% lead.

Paperless Billing

Frederick County Division of Utilities and Solid Waste Management (DUSWM) now offers a more convenient way to receive your quarterly water/sewer bill. We can send your bill directly to your e-mail. Simply contact our office at (301) 600-2354 or e-mail us at WaterSewerBilling@FrederickCountyMD.gov to begin paperless billing.

Payment Options

Visit www.FrederickCountyMD.gov/wspaybill for a list of all payment options. By simply registering your account and linking your water/sewer bill, you can make payments online with a debit/credit card or e-check. A small processing fee appllies. Don't want the hassle of mailing a payment or don't like the idea of paying a processingg fee? We also offer automatic payments through ACH processing. After signing into your account, click "Sign up for Automatic Payments' and have your payment automatically withdrawn each quarter from your checking or savings account. If you have any questions concerning payment options, please contact our billing department at (301) 600-2354.

WINDSOR KNOLLS WATER QUALITY INFORMATION 2016 PWSID 0100041

Your water source came from eight (8) deep wells located in the Windsor Knolls Development. These wells withdraw water from the Ijamsville Formation and Sam's Creek Metabasalt. The Maryland Department of the Environment (MDE) completed the Source Water Assessment for the Windsor Knolls 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 Windsor Knolls water supply is susceptible to nitrate and some microbiological contaminants. This water supply is not susceptible to other inorganic compounds, radiological contaminants, volatile organic compounds, and synthetic organic compounds.

REGULATED CONTAMINANTS - Windsor Knolls Water Treatment Plant - Some testing is done every 3 years.						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Barium 2014	2 ppm	2 ppm	0.023 ppm		NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries
Fluoride 2014	4 ppm	4 ppm	0.48 ppm	0.39 - 0.48 ppm	NO	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate$_1$	10 ppm	10 ppm	5.4 ppm	4.1 - 5.4 ppm	NO	Erosion of natural deposits; Water additive which promotes strong teeth
Turbidity (TT)	< 0.3 NTU 95% of the time	0 NTU	0.35 NTU (99.98% Overall)		NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries
Turbidity	1 NTU maximum	0 NTU	0.35 NTU	0.08 - 0.35 NTU	NO	Erosion of natural deposits; Water additive which promotes strong teeth

1 - The annual average for 2016 was 4.9 ppm based on 11 samples.

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.

UNREGULATED CONTAMINANTS - Windsor Knolls Water Treatment Plant - Some testing is done every 3 years.						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Sodium 2014	N/A	N/A	46.4 ppm	40.5 - 46.4 ppm	NO	Erosion of natural deposits
Sulfate 2014	N/A	N/A	6.1 ppm		NO	Erosion of natural deposits

LEAD AND COPPER - Tested at customer's taps. Testing is done every 3 years and was last completed in 2014.						
Contaminant	EPA's Action Level	Ideal Goal (EPA's MCLG)	90% of Test Levels Were Less Than	# of Tests With Levels Above EPA's Action Level	Violation	Typical Sources
Lead	90% of homes less than 15 ppb	0 ppb	0 ppm	0	NO	Corrosion of household plumbing
Copper	90% of homes less than 1.3 ppm	1.3 ppm	0.176 ppm	0	NO	Corrosion of household plumbing

REGULATED CONTAMINANTS - Windsor Knolls Distribution System						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Annual Average	Range of Test Results	Violation	Typical Sources
Fluoride	4 ppm	4 ppm	0.6 ppm	0.1 - 0.8 ppm	NO	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries
Chlorine	4 ppm	4 ppm	1.4 ppm	0.4 - 2.4 ppm	NO	Erosion of natural deposits; Water additive which promotes strong teeth

WINDSOR KNOLLS WATER QUALITY INFORMATION 2016 PWSID 0100041

DISINFECTION BYPRODUCTS - Windsor Knolls Distribution System						
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Highest $LRAA_1$**	**Range of Test Results**	**Violation**	**Typical Sources**
Total Haloacetic Acids	**60 ppb**	**N/A**	**2.7 ppb**	**0 - 3.0 ppb**	**NO**	**Byproduct of drinking water chlorination**
Total Trihalomethanes	**80 ppb**	**N/A**	**13.8 ppb**	**2.7 - 14.6 ppb**	**NO**	**Byproduct of drinking water chlorination**

1- Compliance is based on the Locational Running Annual Average (LRAA) for each sample site and are calculated quarterly.

BACTERIA IN TAP WATER - Windsor Knolls Distribution System. Minimum of 2 samples per month.					
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Highest Monthly Number of Samples With Total Coliform Present**	**Violation**	**Typical Sources**
Total Coliform	**1 sample contains Total Coliform**	**0**	**0**	**NO**	**Naturally present in the environment**

How to Read the Water Quality Data Table
EPA establishes the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to regulatory limits. Substances not detected are not included in the table.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using he best available treatment technology.

Maximum Contaminant Level Goal (MCLG): 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.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment orother requirements which a system must follow.

Units in the Table: ppm is parts per million (or 1 drop in 1 million gallons), ppb is parts per billion or 1 drop in 1 billion gallons)

Health Effects:

None