



ANNUAL DRINKING WATER QUALITY REPORT

2011 SUMMARY

Dear Water Services Customers,

As Mayor of the City of Frederick, I would like to present the 13th Annual City of Frederick Drinking Water Quality Report. The City of Frederick has developed this report to provide information to our customers about the source and quality of City drinking water. This annual report is a regulatory requirement and I hope helps demonstrate to our customers that our drinking water meets or surpasses all State and Federal laws.

The City continues to achieve its goal of producing high quality, reliable drinking water. The staff at The City of Frederick Water Treatment Plants work around the clock to provide the goods and services our consumers have come to expect. It is their responsibility to perform routine maintenance, skilled operations, and laboratory analysis. As a result, our goal to provide our customers in The City of Frederick with the highest quality of clean and dependable drinking water is again met. We hold ourselves to the utmost standard because that is what we believe our customers deserve.

The tables which follow summarize our 2011 drinking water test results. The drinking water provided by the City of Frederick during the past calendar year met all of the Environmental Protection Agency (EPA) and State of Maryland health standards for drinking water contaminants. There were no contaminant level violations.

I invite you to take some time to read this report as it will provide insight into the processes that must be followed to ensure the high quality of our drinking water. Through the dedication and hard work of our City staff, you are receiving the cleanest and safest possible drinking water.

Sincerely,
Mayor Randy McClement



Randy McClement
Mayor
The City of Frederick

TESTING REQUIREMENTS

The State of Maryland and the EPA require water suppliers to perform contaminant testing on their drinking waters and to report the results on a regular basis. These regulatory requirements are based upon the current federal *Safe Drinking Water Act* (SDWA) and are designed to ensure the quality of your drinking water. To keep our consumers informed this annual summary is prepared after the end of each calendar year. This report is then mailed to our water customers and made available to the public no later than July 1st of each year.

ABOUT THE DATA

Most of the information shown in the data tables is from samples collected during 2011, but some contaminants are not monitored for every year. Data not from 2011 will be noted as such. Data associated with a particular water source has been identified by the water plant name in the data tables. Testing has also been conducted for over 100 other contaminants including organic chemicals like industrial solvents and pesticides, inorganic contaminants such as metals, and radioactive compounds like radon. None of these other contaminants were detected. Please call the number listed under the city contacts section for technical information if you have any questions relating to the City of Frederick's drinking water monitoring program.

CONTAMINANT INFORMATION

Although there were detections of some contaminants in city water, all of those found were at safe levels. All sources of drinking water are subject to potential contamination by substances that occur naturally or are manmade. As water travels over the surface of land or through the ground, some of these substances can be picked up and transported with the water. These can be microbes, organic or inorganic chemicals, or 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 can be obtained from the Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791), or at the EPA website www.epa.gov/safewater

PRECAUTIONS FOR VULNERABLE POPULATIONS

The City of Frederick reminds those who may have weakened immune systems that any drinking water (tap or bottled) should not be considered sterile. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy, those who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from microbial infections. These people should seek advice about drinking water from their health care providers. Guidelines developed by the EPA and Centers for Disease Control (CDC) on ways to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available by calling the Safe Drinking Water Hotline at (800-426-4791) or visiting www.epa.gov/safewater

INFORMATION ABOUT LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from service lines and home piping that contains lead components. The City of Frederick 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 water, you may want to have your water tested. More information on lead in drinking water is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791 or at the EPA website www.epa.gov/

SOURCE WATER ASSESSMENTS

The Maryland Department of Environment (MDE) has completed source water assessments on the vulnerability of all State water sources to contamination. For more information on specific assessments you may call the Maryland Department of Environment - Source Protection Division at 410-537-3714 or the technical information number listed under the City contacts section.

CITY WATER SOURCES

During 2011 the City of Frederick utilized four different water sources to supply our service area. During the past year, you may have received treated water from any one of these sources or a mixture of them depending upon your location within our service area. The average daily production from all sources during 2011 was **5.61** million gallons per day. The percentage of drinking water supplied by each of the four water sources utilized during 2011:



50.5% of the water came from **Linganore Creek**.



28.4% came from the **Monocacy River**.



15.5% came from **Fishing Creek**.



5.6% came from the **Potomac River** via Frederick County Interconnection

DEFINITIONS OF ABBREVIATIONS AND TERMS USED IN THIS REPORT

In the data tables you will see terminology with which you may not be familiar. To help you understand this information please note the following definitions:

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety. These goals represent a target level for a contaminant that is not necessarily achievable with standard treatment

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water based on present regulations as set by the EPA. To protect the public health, MCLs are set as close to the MCLGs as feasible, based on the best treatment technology currently available

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

TT - Treatment Technique - A required process intended to reduce the level of a contaminant in water

NTU - Nephelometric Turbidity Unit - A unit of measure for the cloudiness or "turbidity of drinking water

PPM - Parts Per Million - One part substance to one million parts water (equivalent to milligrams per liter)

PPB - Parts Per Billion - One part substance to one billion parts water (equivalent to micrograms per liter)

NA- means **Not Applicable**

ND - Not Detected - at the lowest method detection limit currently listed by the EPA

MRDL - Maximum Residual Disinfection Level - The highest level of a disinfectant allowed in drinking water

REGULATED CONTAMINANTS DETECTED AT CITY DRINKING WATER PLANTS - 2011

2011 CCR—PWSID # MD0100015		MONOCACY PLANT				LINGANORE		FISHING CREEK		NEW DESIGN	
CONTAMINANT	UNITS	MCLG	MCL	REPORT LEVEL ¹	RANGE	REPORT LEVEL	RANGE	REPORT LEVEL	RANGE	REPORT LEVEL	RANGE
FLUORIDE	PPM	4	4	1.4	NA	0.8	NA	0.6	NA	0.4	0.2-1.2
NITRATE	PPM	10	10	1.9	NA	2.4	NA	<0.1	NA	1.7	NA
BARIUM	PPM	2	2	0.03	NA	0.03	NA	0.03	NA	0.06	NA
ATRAZINE	PPB	3	3	0.27	ND-0.27	0.32	0.20-0.32	ND	NA	ND	NA
SIMIZINE	PPB	4	4	ND	NA	0.23	ND-0.23	ND	NA	ND	NA
TURBIDITY (TT) 2011 MAXIMUM	NTU	0.00	1.00	0.30	NA	0.30	NA	0.23	NA	1.00	NA
TURBIDITY (TT) VALUES >0.3 NTU	%	0.00	5.00	0.00	NA	0.00	NA	0.00	NA	0.08	NA
TOTAL ORGANIC CARBON (TT)	%	NA	NA	MET % REMOVAL REQUIREMENT	NA	MET % REMOVAL REQUIREMENT	NA	MET % REMOVAL REQUIREMENT	NA	MET % REMOVAL REQUIREMENT	NA

1. MCL column may also show a Treatment Technique (TT) or Action Level (AL) regulatory value where applicable

REGULATED CONTAMINANTS DETECTED AT CITY DISTRIBUTION SYSTEM SITES - 2011

CONTAMINANT	UNITS	MCLG	MCL ¹	REPORTED LEVEL	RANGE
CHLORINE	PPM	4	4	1.2	0.2 - 2.6
TOTAL TRIHALO-METHANES	PPB	NA	80	45.0	6.9-106.8
TOTAL HALOACETIC ACIDS	PPB	NA	60	44.9	8.0-81.4
COPPER ² (AL)	PPB	1300	1300	190	6.7- 280
LEAD ² (AL)	PPB	0	15	1.1	<1.0 - 2.3

1. Applicable Regulatory MCL, TT, or MRDL value is shown in this column.

2. Lead and Copper testing is currently performed on a Triennial basis. Next sampling and testing will be during 2012.

TYPICAL SOURCES OF REGULATED CONTAMINANTS DETECTED IN CITY DRINKING WATER - 2011

CONTAMINANT	TYPICAL SOURCE OF CONTAMINANT
CHLORINE	Disinfectant additive which controls growth of microbes in water
FLUORIDE	Additive which promotes strong teeth and reduces incidence of cavities
NITRATE	Runoff from fertilizer use; discharges from sewage treatment plants; lechate from septic systems; natural deposits
BARIUM	Erosion of natural barium deposits
LEAD	Corrosion of plumbing systems which have lead components
COPPER	Corrosion of plumbing systems which have copper components.
SIMIZINE	Runoff following the use of this herbicide
ATRAZINE	Runoff following the use of this herbicide
TURBIDITY	Runoff of soil and other particles; Turbidity measurements are used to gauge the effectiveness of our filtration systems
TOTAL TRIHALOMETHANES	By-products of drinking water chlorination. Include bromoform, bromodichloromethane, chlorodibromomethane, chloroform
TOTAL HALOACETIC ACIDS	By-products of drinking water chlorination. Include monochloroaceticacid, monobromoaceticacid, dichloroaceticacid, dibromoaceticacid, trichloroaceticacid
TOTAL ORGANIC CARBON (TOC)	Natural and manmade sources. Reducing TOC levels prior to addition of disinfectants helps lower the formation of disinfection byproducts. % removal requirements vary with alkalinity



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Randy McClement
Mayor

Board of Aldermen
Karen Young, *President Pro Tem*
Michael O'Connor
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PUBLIC INVOLVEMENT OPPORTUNITIES

The public is encouraged and invited to participate and provide input on drinking water issues.

Mayor and Board of Aldermen Public Meetings are held at City Hall every 1st & 3rd Thursday of each month at 7 p.m.

CITY CONTACTS

For additional copies of this report or general information call 301-600-1681.

For technical information on contaminant testing or results call 301-600-1473.

For information on our water treatment plants or processes call 301-600-1186.

You have received this Drinking Water Quality Report due to the Post Office Districts. If you are not a customer of the City of Frederick, please disregard.