

# Annual Drinking Water Quality Report

The City of Crisfield, Maryland/ 2017

PWSID# 0190001

May, 2018

We're pleased to present this year's Annual Drinking Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. The source of our drinking water is several Aquifers which are the Maggothy, Paleocene, and Raritan, which lie about 900 to 1320 feet below the earth's surface. An aquifer is a sort of underground reservoir or deposit of water, which is tapped by drilling wells and pumping the water to the surface for distribution. The 900 feet of earth between surface sources of contamination and these underground rivers helps to purify the water before it actually reaches the aquifer, making it easier for us to treat before we pump it into the water distribution system.

We are pleased to report that our drinking water is safe and meets federal and state requirements. The following report is provided in compliance with federal regulations and has been provided annually since 1999. This report outlines the quality of our finished drinking water and what that quality means. Some people may be more vulnerable to contaminants in drinking water than the general population. Immune/compromised persons such as persons 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 about drinking water from their health care providers. 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 (800-426-4791).

If you have any questions about this report or concerning your water utility, please contact Public Utilities Director Dennis Parkinson (410) 251-0113. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Mayor and Council meetings. The City of Crisfield's Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. The tables on the following pages show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2017. 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. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does **not necessarily** pose a health risk.

## Definitions

In this report you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

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

Maximum Contaminant Level - The ~~A~~Maximum Allowed~~@~~ (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLG as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - The Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG allow for a margin of safety.

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<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants</b>						
Copper (2017) (Distribution)	N	ND	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (2017) (Distribution)	N	1	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Chlorine (2017)	N	0.3	ppm	4	4	Water Additive used to control microbes
Fluoride (2016)	N	2.9	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Radioactive Contaminants</b>						
Beta/photon emitters (2017)	N	8.1	pCi/l	0	50	Decay of natural and man-made deposits
Alpha emitters (2017)	N	11.4	pCi/l	0	15	Erosion of natural deposits

Note: Test results are for 2017 unless otherwise noted; these are the most recent available results.

**NOTE:** As can be seen by results listed in the above tables, lead, which is tested for triennially (every 3 years) at City of Crisfield, has been detected in our most recently collected samples in 2017.

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 Crisfield 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 <http://www.epa.gov/safewater/lead>.

The wells supplying the water to the City of Crisfield are from 900 to 1455 feet deep. The aquifers that supply the water are known as the Potomac Group and the Brightseat formations. Between the land surface and the deep aquifers are several layers of natural clay materials. These layers protect the aquifers from contamination that may come from the land surface. Compared to many other wells used for water supplies, these wells have a very high degree of protection from man-made contamination. As a result, the chemical constituents in the water provided by these deep wells are naturally occurring.

For nitrates and the other constituents that were detected at levels lower than the allowable MCL, it is important to understand that the EPA has determined that drinking water IS safe at these allowable levels.

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

The City also checks for Total coliform in the distribution system each month at five different sites. This is a requirement and also helps assure safe quality water for you the consumer as does this entire test done on the Cities Water system.

The City also checks for fluoride in its wells each year and if the results are above 2.9 ppm the secondary standard for fluoride then this notice has to be issued. The purpose of the notice is to provide information about the fluoride concentration and its potential effects in the drinking water supplied by the City of Crisfield. Recent sampling indicates that the secondary standards for fluoride continue to be exceeded in the water supplied by the City.

The most recent samples collected measured 3.35 milligrams per liter (mg/l). Consequently the U.S. EPA requires that suppliers of water provide the following language in this public notice regarding the potential effects of consuming water in excess of the secondary standard. The secondary standard is based on aesthetics and is not a health concern. \_

Federal regulations require that fluoride, which occurs naturally in your water supply not exceed a Concentration of 4.0 mg/l in drinking water. This is an enforceable standard called a Maximum Contaminant level or (MCL), and it has been established to protect the public health. Exposure to drinking water levels above 4.0 mg/l for many years may result in some cases of crippling skeletal fluorosis, which is a serious bone disorder.

Federal law also requires that we notify you when monitoring indicates that the fluoride in your drinking water exceeds 2.0 mg/l. This is intended to alert families about dental problems that might affect children under nine years of age. The fluoride concentration of your water exceeds this guideline.

Fluoride in children's drinking water at levels of approximately 1 mg/l reduces the number of dental cavities. However some children exposed to levels of fluoride greater than about 2.0 mg/l may develop dental fluorosis. Dental fluorosis in its moderate and severe forms is a brown staining and/or pitting of the permanent teeth.

Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated fluoride levels. Households without children are not expected to be affected by this level of fluoride. Families with children under the ages of nine are encouraged to seek sources of drinking water for their children to avoid the possibility of staining and pitting on their teeth.

Your water supplier can lower the concentrations of the fluoride in the water so that you will still receive the benefits of cavity prevention while the possibility of stained and pitting is minimized. Removal of fluoride will increase your water cost. Treatment systems are also commercially available for home use. Information on such systems is available at the address given at the end of this report.

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 1-800-426-4791.

The presence of some contaminants in drinking water is unavoidable, but we make every effort to keep our water at or below the levels specified by law as being safe for consumption. Our Water Department staff consists of three operators who have a combined experience of more than 30 years between them. Together they have attended more than 20 hours of Continuing Education training in the past year in an effort to keep up-to-date with the latest in water treatment techniques to provide you with the best quality water possible. The provision of quality water is an on-going effort for the City of Crisfield and its staff. And is an area in which we are continuously trying to improve upon.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We must set our

water rates so that the system pays for itself without subsidy from property tax revenues. In this way, the cost of the water service can be borne by those who actually use water rather than just by the property owners.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. This report is also available at the Library, Post office, City Hall and on Line at the City of Crisfield's Web site @ [www.cityofcrisfield-md.gov](http://www.cityofcrisfield-md.gov) , for review. Thank you.

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