



# 2011 City of Annapolis Annual Drinking Water Report

(Prepared June 2012)

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Prepared by James FitzGerald, Water Plant Superintendent

**We** are pleased to present the Annual Water Quality Report for calendar year 2011.

This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe, pleasant and dependable supply of drinking water. We are very pleased to report that our drinking water is safe, meeting or exceeding all Federal and State requirements.

This report is provided annually in compliance with Federal regulations, and reflects the quality of our treated 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 high quality of your drinking water.

Your water treatment plant produces and delivers over 1.5 billion gallons of water per year, and is supplied with raw water from eight deep wells. These deep wells are positioned in the Magothy and Upper and Lower Patapsco aquifers.

There are two wells in the Lower Patapsco aquifer at a depth of approximately 1000 feet, two wells in the Upper Patapsco aquifer at 500 feet and four wells in the Magothy aquifer that are about 300 feet deep. These wells are located in close proximity to the treatment plant located on Defense Highway.

**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 water, may reasonably be expected to contain at least small amounts of some of these substances. It is important to remember that the presence of these substances does not necessarily pose a health risk. More information about contaminants and their potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 1-800-426-4791 or <http://www.epa.gov/ogwdw/hotline>.

The City of Annapolis Water Supply and Treatment Facility routinely monitors for contaminants in your drinking water in accordance with Federal and State laws. The Contaminant Table shows those constituents which were present at levels above the minimum detection limit but below the Maximum Contaminant Level (MCL).

Although the city is required to periodically test for the presence of over 110 contaminants, those listed in the table were the only ones found at a detectable level. We have learned through our monitoring and testing that some substances in very small amounts have been detected. The EPA has determined that, at these levels, your water is safe.



**In** June of 2003, the City of Annapolis, in conjunction with Anne Arundel County, completed a study of the outcrop areas of the aquifers used as raw water sources at the Annapolis Water Supply and Treatment Facility. The study concluded that there are no immediate threats to the raw water quality and that there is little chance of any change to this threat condition in the future.

**MCL's** (Maximum Contaminant Levels) are set at very stringent levels. To understand the possible health effects described for many regulated substances, a person would have to drink two liters of water every day at the maximum allowed level for a lifetime to have a one-in-a-million chance of having the described health effect for the substance.

In our continuing efforts to maintain a safe and dependable water supply, it will be necessary to make improvements, modifications, and/or renewals in the City's water system. Some of the improvements that have been completed or proposed post 9/11 include:

- The construction of the replacement fluoride feed system was completed and the system is now operational.
- The City has started the contractor selection process for replacement of the Water Treatment Plant.
- The City has initiated an aggressive program to replace old water mains and appurtenances and to upgrade services.

Improvements are undertaken each year to ensure that an adequate supply of reliable, safe, clean, and pleasant potable water is available to each household. The costs of these improvements are reflected in the water rate structure.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people 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 providers. EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium (an organism that is rarely found in water from underground aquifers and only occurs in surface water) and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

## Terms and Abbreviations in the Table:

**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 error.

**Maximum Contaminant Level (MCL):**

It is 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.

**Action Level (AL):**

The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

## Units of Measure and Abbreviations in the Table:

ppb: Parts per billion equivalent to (micrograms per liter)

ppm: Parts per million equivalent to (milligrams per liter)

mrem/yr: Millirems per year (measures of radiation).

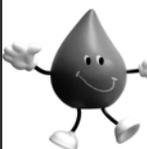
## Note:

In 2009, the City was required to test for 10 additional Unregulated Contaminants. None were detected above the minimum detection limit. These substances are tested to determine whether there is a need for further testing or regulation.

## 2011 City of Annapolis Water Report Summary ~ Prepared in 2012

INORGANIC CONTAMINANT	MCL	MCLG	LEVEL DETECTED	SAMPLE DATE	SOURCE
Fluoride (ppm)	4	4	0.87	1/2011	Water additive to promote dental health
Copper (ppm)	AL= 1.3	1.3	0.006	7/2011	Corrosion of household plumbing
Lead (ppm)	AL= 0.015	0	0.000	7/2011	Corrosion of household plumbing
Barium (ppm)	2	2	0.008	4/2011	Discharge of drilling wastes, discharge from metal refineries and erosion of natural deposits
<b>RADIONUCLIDES</b>					
Gross Beta (mrem/yr)	4	0	3	5/2009	Erosion of natural deposits
<b>SYNTHETIC ORGANIC CONTAMINANT</b>					
Di(2-ethylhexyl) Phthalate (ppm)	6	0	.09	1/2004	Discharge from rubber & chemical
<b>DISINFECTION BI-PRODUCTS</b>					
Total Trihalomethanes (ppb)	80	N/A	1.9 ~ 6.8	Quarterly /2011	Byproduct of chlorinated organic matter
Total HAA5 (ppb)	60	N/A	<1 ~ 1.2	Quarterly /2011	Byproduct of chlorinated organic matter
<b>METALS</b>					
Sodium (ppm)	N/A	N/A	3.48	4/2011	Naturally present in the environment

**Lead and Copper Rule:** 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 Annapolis 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 at least 30 seconds 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>.



We want our customers and citizens to be informed about their water utility. If you have any questions about this report or concerning your water utility, please contact the Water Plant Superintendent or Assistant Superintendent, at 410-224-2140.

