

2017 WATER QUALITY REPORT

Harford County Division of Water and Sewer



Dear Valued Customer:

Did you know?

To provide you with clean and dependable water services, Harford County treated 4.3 billion gallons of water in 2017 at our three water treatment plants. In addition, we maintain 700 miles of water mains and 4,000 fire hydrants, along with 12 storage tanks and 12 booster stations.

It is our pleasure to serve you.

Important Health Information from the Environmental Protection Agency

Drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminants. Technically, a contaminant is anything that is not H₂O. The presence of these contaminants does not necessarily mean that the water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as cancer patients undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants, can be particularly at risk for infections. These people should seek advice from their health care providers about drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791) or EPA's website epa.gov/safewater. More information about contaminants and potential health effects can also be obtained from the EPA hotline or website.

Nitrates

Levels above 10 ppm in drinking water are a health risk for infants of less than six 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 advice about drinking water from your health care provider.

Where Does Your Water Come From?

A requirement under the Safe Drinking Water Act is for each State to develop a Source Water Assessment Program (SWAP). The assessments evaluate the drinking water sources that serve public water systems, and examine activities associated with the surrounding areas to determine their contribution to contamination. The required components of an Assessment Report are: 1) outline the area that contributes water to the source; 2) identify potential sources of contamination; and 3) determine the susceptibility of the water supply to contamination.

WELLFIELD ASSESSMENT

The Maryland Department of the Environment has conducted a Source Water Assessment for Harford County's well water supply. The source for the well water is a semi-confined aquifer known as the Potomac Group. Potential sources of contamination are agricultural land use, underground storage tanks, ground water contamination sites, and commercial/industrial sites. It was determined that the well water supply is susceptible to contamination by nitrates, volatile organic compounds (e.g. solvents and gasoline), and radionuclides.

SUSQUEHANNA RIVER ASSESSMENT

The Susquehanna River Basin Commission conducted a Source Water Assessment of the Susquehanna River. Harford County has two surface water plants that can draw water from the lower Susquehanna Subbasin. Potential sources of contamination are agricultural land use, urban/residential development, boating activities, sewage effluent, major transportation corridors (highways, railroads) and nuclear power generating plants.

It was determined that the water supply is susceptible to contamination by turbidity and sediment, microorganisms, inorganic compounds, organic compounds, disinfection byproducts, and radionuclides.

LOCH RAVEN ASSESSMENT

The Maryland Department of the Environment has conducted a Source Water Assessment for Loch Raven Reservoir. The reservoir collects water from a 303 square mile watershed spanning three Maryland Counties (Baltimore, Carroll, and Harford). Harford County has a surface water plant that can draw from the reservoir. Potential sources of contamination are public and private sewage systems, storm runoff from agricultural and developed areas, and spillage of hazardous materials. It was determined that the water supply is susceptible to contamination by phosphorus, turbidity and sediment, pathogenic protozoans, disinfection byproducts, and sodium.

TREATMENT PLANT PROCESSES

The County's Havre de Grace WTP treats water from the Susquehanna River by adsorption clarification, multi-media filtration, and with chemical treatment for coagulation, disinfection, pH adjustment, and fluoridation. The Abingdon WTP treats water from the Susquehanna River or the Loch Raven Reservoir by sedimentation, dual media filtration, and with chemical treatment for coagulation, disinfection, pH adjustment, corrosion inhibition, and fluoridation. The well water plant treats water from the Potomac Group Aquifer by activated carbon filtration, and with chemical treatment for disinfection, pH adjustment, corrosion inhibition, and fluoridation.

Additional Information on Lead

If present, elevated levels of lead can cause serious health problem, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Harford County Division of Water and Sewer 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 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](http://www.epa.gov/safewater/lead).

What is in the Water?

The table on the reverse lists all of the drinking water contaminants that we detected. The contaminant levels from other utilities that have provided water are incorporated into the tables. The state allows us to monitor for some contaminants less than once per year because the concentration of these contaminants changes infrequently. Unless otherwise noted, the data presented in the tables is from January 1 to December 31, 2017. The definitions provided at the end of the table may be useful in interpreting the data.

For questions about this report or water quality contact Allen Webb or Gregg Bates at 410-638-3939. For water emergencies call 410-612-1612. For additional information, go to web page: www.harfordcountymd.gov/782/Water-Sewer. Select the tab "Water Quality Reports" on the left.

WATER QUALITY DATA

Contaminants:							
Metals	AL	90th%	Samples > AL	Violation		Typical Source	
Copper (ppm)	1.3	0.17	0	No		Erosion, corrosion of plumbing, wood preservatives.	
Lead (ppb)	15	0.002	0	No		Erosion of natural deposits, corrosion of plumbing.	
Disinfectants and Disinfection By-Products							
	Your Water						Typical Source
	MCLG	MCL	CL	Low	High	Violation	
Chlorine (as Cl ₂) (ppm)	4	4	2.9	0.6	2.9	No	Water additive to control microbes. Avg. 1.4
HAA5 (Total Haloacetic Acids (ppb) For 2016 & 2017)	N/A	60	26	4	41	No	By-product of drinking water chlorination. CL = rolling yearly average by quarter.
TTHMs (Total Trihalomethanes) (ppb) For 2016 & 2017)	N/A	80	42	8	47	No	By-product of drinking water chlorination. CL = rolling yearly average by quarter.
Inorganic Contaminants							
Barium (ppm)	2	2	0.2	0.1	0.2	No	Discharge of drilling wastes and metal refineries. Erosion of natural deposits.
Chromium (ppb)	100	100	2	ND	2	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride (ppm)	4	4	0.7	0.5	0.7	No	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories. Avg. 0.6
Nitrate (ppm as Nitrogen)	10	10	4.1	0.9	4.1	No	Runoff from fertilizer use; leaking from septic tanks, sewage & erosion of natural deposits.
Microbiological Contaminants							
Total Coliform (5% positive in a month)	0	5%	0%	0%	0%	No	Naturally present in the environment. 0 positive out of 1437 samples.
Turbidity (NTU) TT ≤ 0.3 in 95% of samples in a month. Never > 1.0	N/A	TT	100%	0.02	0.19	No	From soil runoff. Average 0.04 NTU.
Organic Contaminants							
Atrazine (ppb)	3	3	0.3	ND	0.3	No	Runoff from herbicide used on row crops.
Ethylene dibromide (ppb)	0	0.05	0.01	ND	0.01	No	Discharge from petroleum refineries.
Simazine (ppb)	4	4	0.1	ND	0.1	No	Herbicide runoff.
Total Organic Carbon (ppm)	N/A	TT	CL by % removal range 0.9 to 3.0.			No	TOC has no health effects but can provide a medium for formation of disinfection byproducts.
Radioactive Contaminants							
Combined Radium (226 & 228) (pCi/L)	0	5	1.7	1.7	1.7	No	Erosion of natural deposits.
Gross Alpha (pCi/L)	0	15	8.1	8.1	8.1	No	Erosion of natural deposits.
Unregulated Contaminants							
	Avg.	Low	High	Typical Source			
Manganese (ppm)	.01	ND	0.03	Erosion of natural deposits.			
Metolachlor (ppb)	ND	ND	0.1	Accidental spills, spraying, leaching from fields via run off.			
Perfluoro-n-Octanoic Acid (ppt)	1.6	ND	4.84	Firefighting foams, industrial waste sites.			
Sodium (ppm)	27	9	81	Sodium salts used in water treatment; erosion of natural deposits.			

DEFINITIONS

Action Level (AL) - If a contaminant exceeds this regulatory level, it can trigger improved treatment techniques or other requirements a utility must follow (for lead and copper only, see Ninetieth Percentile below).

Compliance Level (CL) - Is the value used to determine compliance with EPA and State regulations.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water.

Intestinal Parasites - Microorganisms like Cryptosporidium and Giardia lamblia can cause gastrointestinal illness (e.g., diarrhea, vomiting and cramps). The surface water sources (the Susquehanna River and the Loch Raven Reservoir) for Harford County's treatment plants are tested for both organisms. The untreated water did show the presence of Cryptosporidium and Giardia. Both organisms are resistant to chlorine disinfection, but can be removed by filtration (see precautions on the reverse).

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

Ninetieth Percentile (for lead and copper testing only) - Ninety % of the homes, where the tap water was tested, are at or below this value. EPA only requires the voluntary testing of homes built between 1983 and 1986, where lead solder has been used in plumbing.

Non-Detects (ND) - Laboratory analysis indicating a particular contaminant is not present when using EPA regulated methods and equipment. The contaminant may be present at concentrations too low to measure using current technology.

Parts per Million (ppm), Billion (ppb), or Trillion (ppt) - Measurement units for the level of contaminants in water. One unit per each ppm, ppb or ppt.

Picocuries per Liter (pCi/L) - Picocuries per liter is a measurement of radioactivity in water.

Total Coliform - Bacteria that are naturally present in the environment. They are used to indicate the presence of other potentially harmful bacteria. CL < 5% samples positive each month.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water. The compliance level (CL) for meeting turbidity and TOC standards is based on the TT used, instead of the MCL.

Turbidity - The cloudy appearance of water caused by the presence of suspended material. Turbidity has no health effects but can interfere with disinfection and provide a medium for microbial growth. An NTU is a unit of measure for turbidity and a level of 5 is just visible to an average person.

Unregulated Contaminants - Unregulated contaminant monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate them.