



The City of Havre de Grace is pleased to present the 19th Annual Consumer Confidence Report on Water Quality.

This report shows the quality of the water as pumped to your home from **January 1 to December 31, 2016**,

- **explains** the likely sources of contaminants,
- **offers** warnings for people in special risk groups; and,
- **recommends** measures all residents can take to help preserve the quality of water.

Important to know:

The EPA has determined that your water is safe.

The Susquehanna River is the source of your drinking water. The (EPA) Environmental Protection Agency recognizes that all drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some 22 known contaminants. Federal and State laws require the City of Havre de Grace to routinely monitor the levels of these possible contaminants in your drinking water.

A BRIEF SUMMARY OF THE RESULTS OF OUR TESTING:

The third quarter of testing showed we exceeded the acceptable level of 80 ppb (parts per billion) with the **THM's**.^{*} Consequently all homeowners were notified in the area impacted. We addressed the issue by hiring GHD Engineering to study the THM's and then followed their recommendations to correct the chemical process. This resolved the problem as indicated in the annual average of **57.72**. Subsequent upgrades to the Water Plant will further help with this issue.

*** Disinfection By-products:** Our database shows that the range of TTHMs was 24.1 - 161.1 ppb, and the highest Locational Running Annual Average (LRAA) was calculated as 121 ppb at site DBP101 in the first quarter of 2016 (Harford Memorial Hospital (prior to December 2016, the sample site was 1305 Currier Street). For HAA5s, the highest LRAA was calculated as 54 ppb at site DBP102 in the second quarter of 2016 (512 Green Street (prior to December 2016, the sample site was 1731 Chapel Road).

Improvements to the City's Water Treatment Plant

Equipment maintenance and replacement is an ongoing process to keep the water quality, technology and operations in top form and to meet the Safe Drinking Water Act (SDWA) requirements.

All towers have been inspected. We have renovated four river pumps, updated lab equipment and purchased new analyzers. We rebuilt booster pumps at the Graceview Pumping Station and added a new generator for back-up.

Many valves have been replaced in the plant with many more to be replaced in 2017. We have also replaced the aging roof over the entire building this past year. Intake lines from the river have been inspected and repairs made as needed.

Planned Upgrades for 2017

To address the needs of our aging infrastructure, the Water Distribution Team will continue to replace pipes, water lines, and valves in the system. The Water Plant will be upgrading the control system, the filtration system and increasing the size of the laboratory. The plant upgrades are being engineered by GHD Engineering for construction to occur this fall.

Preserve Water Quality - Recommended Measures

- Flush your water heater once a year.
- Clean the screens on your spigots.
- When water has not been used for several hours, run the cold water at least 30 seconds to insure you are receiving fresh water from the main instead of dormant water in your pipes.
- Make sure the water shut-off valve inside your home is operable in case you have a leak and need to shut-off the supply immediately.

Any changes in your water pressure, taste or color should be reported as soon as possible. Please call the City's Water Plant at 410-939-1070. Staff on site 24 hours a day, 7 days a week, 365 days a year.

Precautions for Special Risk Groups

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 persons, 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 microbial contaminants are available from the **EPA -Safe Drinking Water Hotline 800-426-4791**.

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. [NAME OF UTILITY] 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 www.epa.gov/safewater/lead.

City Staff are STATE CERTIFIED in their Fields

Water Treatment Plant Operators, Waster Water Treatment Plant Operators, Waste Water Collection Operators & Water Distribution Operators have all passed the State Board Exam.

DEFINITIONS

Action Level – The concentration of a contaminant which can trigger improved treatment techniques or other requirements which a water system must follow.

Compliance Level-The value used to determine compliance with EPA or State regulations.

Intestinal Parasites- Microorganisms like Cryptosporidium & Giardia lamblia can cause gastrointestinal illness (e.g., diarrhea, vomiting, and cramps).

Maximum Contaminant Level (MCL)–“Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water.

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 an extra margin of safety.

Ninetieth Percentile (90th%) for lead & copper testing only. Ninety percent 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 the plumbing.

Parts per million (ppm), per billion (ppb), per trillion (ppt)

Measurement units for the level of contaminants in water.

One ppm corresponds to a single penny in \$10,000;

One ppb corresponds to one penny in 10,000,000 and

One ppt corresponds to one penny in \$10,000,000,000.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the 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 is < 5 % positive each month.

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

Turbidity - The cloudy appearance of water caused by the presence of suspended matter. Turbidity has no health effects. However, it can interfere with disinfection and provide a medium for microbial growth. **NTU** (Nephelometric Turbidity Units) is a unit of measure for the turbidity of water. A turbidity level of 5.0 NTU is just noticeable to the average person.

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

Contaminant	Violation Y/N	Level Detected	Unit of Measure	MCL	MCLG	Likely source of contamination
RADIOACTIVE CONTAMINANTS						
Beta/photon emitters	N	ND-2013 due again 2022	pCi/L	4	0	Decay of natural and man-made deposits
Alpha emitters	N	ND-2013 due again 2022	pCi/L	15	0	Erosion of natural Deposits
Combined radium	N	ND-2004 due again 2022	pCi/L	5	0	Erosion of natural Deposits
INORGANIC CONTAMINANTS						
Barium	N	.028	ppm	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	N	0.06 2016	ppm	AL= 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	N	0.0 -.90	ppm	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories
Lead	N	ND-2016	ppm	AL= .015	0.0	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (inorganic)	N	ND-2016	ppb	2.0	2.0	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen)	N	1.02	ppm	10.0	10.0	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
DISINFECTION BY PRODUCTS - Look for * on front side for more details.						
Chlorine	N	1.0-2.3	ppm	4.0	4.0	Drinking water chlorination
TTHM Total Trihalomethanes	Y	24.1-161.1 range Rolling location avg. 121 (3 rd qtr)	ppb	80.0 rolling avg.	NA	By-product of drinking water chlorinating CL=Rolling yearly avg. by quarter
-HAA5 Haloacetic acids	N	3.1 to 72 range Rolling location avg. 54	ppb	54	NA	By-product of drinking water chlorinating CL=Rolling yearly avg. by quarter
MICROBIOLOGICAL CONTAMINANTS						
Cryptosporidium	N	Not detected	TT		0	Human and animal fecal wastes
Giardia Lamblia	N	Not detected	TT		0	Human and animal fecal wastes
Total Coliforms	N	0.00		<5%	0	Naturally present in the environment
Total Organic Carbon	N	1.2-2.3 range	TT	TT	NA	Naturally present in the environment CL based on % removal
Turbidity	N	.023-.250 range	NTU	<0.5	NA	Soil run-off
NON-REGULATED CONTAMINANTS						
Sodium	N	15.1-79.4	ppm	NA	NA	Human and animal fecal wastes
Chloride	N	35 –162	ppm	NA	NA	Human and animal fecal wastes
Alkalinity	N	36-86	ppm	NA	NA	Naturally present in the environment
Hardness	N	68-145	ppm	NA	NA	Naturally present in the environment
pH	N	7.05 to 7.7	STD	NA	NA	Soil run-off