Terms and Units Defined:

Action Level (AL) is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
LRAA is a locational running annual average. It represents the average concentration of disinfectant byproducts at one sample location from the current quarter and the previous three quarters.
Maximum Contaminant Level (MCL) 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.
Maximum Contaminant Level Goal (MCLG) represents a target level for contaminants below which there is no known or expected health risk. MCLGs allow for a margin of safety. These 'Goals' are not necessarily achievable.
Maximum Disinfectant Residual Level (MRDL) is the highest level of a disinfectant allowed in drinking water.
Maximum Disinfectant Residual Level Goal (MDRLG) is the level of a drinking water disinfectant below which there is no known or expected health risk.
n/a = Not applicable
n/d = Not detected
Nephelometric Turbidity Unit (NTU) is a measure of the clarity of water.
Parts per million (ppm) - one part per million corresponds to one minute in two years, or one penny in $10,000.
Parts per billion (ppb) - one part per billion corresponds to one minute in 2,000 years, or one penny in $10,000,000.
Picocuries per liter (pCi/l) is a measure of radioactivity.
Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.
Turbidity is a measure of the cloudiness of the water and is used as an indicator that the filtration system is functioning properly.

CITY OF HAGERSTOWN, MD

UTILITIES DEPARTMENT
WATER DIVISION
301-739-8577 extension 680

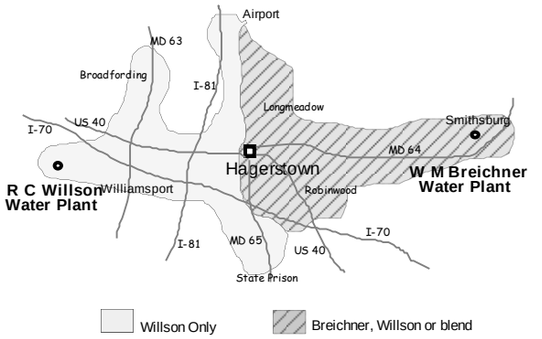
2017 CONSUMER CONFIDENCE REPORT
PWSID# MD0210010

In compliance with the requirements of the Safe Drinking Water Act, the Hagerstown Utilities Department Water Division is distributing to all of its customers this Consumer Confidence Report (CCR) which lists the results of sampling for the Environmental Protection Agency (EPA) regulated and unregulated contaminants detected in the City's potable water supply in 2017. Tested contaminants include metals, organic and inorganic compounds, pesticides and volatile organic contaminants. The comparison of these values to the EPA's Maximum Contaminant Level (MCL) for each contaminant is also listed.

If you desire further information about this report or about your water utility in general, please call the Utilities Department Water Division at (301) 739-8577 x 680. If you wish to participate in decisions that may affect water quality, you are welcome to attend any of the meetings of the Mayor and Council held in the Council Chambers of City Hall. The meetings are open to the public and are generally held on the 1st, 2nd, and 3rd Tuesdays of every month at 4:00 pm and on the 4th Tuesday at 7:00 pm. Please check your newspaper for exact times.

What Is the Source of City Water?

Hagerstown City water is surface water that comes from one of two City-owned treatment plants. As water travels over the land or through the ground, it dissolves naturally occurring elements and compounds. It can also pick up substances resulting from the presence of animals, or from human activity. The main plant is the R.C. Willson Water Treatment Plant which uses the Potomac River as the water source. The second plant is the W.M. Breichner Water Treatment Plant which uses the Edgemont Reservoir as its source. Currently, the Edgemont Reservoir and W.M. Breichner Plant are off-line while repairs and upgrades are made to the dam and treatment facility. The reservoir is fed by two streams, the Warner Hollow and the Raven Rock. The Willson Plant is located near Williamsport and the Breichner Plant is near Smithsburg. The source of your water can be found by your location in the drawing below.



What Happens to the Water at the Treatment Plants?

Both plants use the same basic processes to treat the water. The pH is lowered using sulfuric acid to aid and enhance coagulation. Aluminum coagulants are added causing small particles to adhere to each other, making them heavy enough to either settle out of the water in sedimentation basins or be removed in clarifiers. The settled or clarified water is then filtered through anthracite coal and sand to remove the remaining fine particles. Chlorine is added to deactivate harmful bacteria and viruses. Ammonia is added to the chlorinated water to form monochloramine, which is the disinfectant found in the distribution system. Caustic soda and an orthophosphate-based corrosion inhibitor are added to minimize the dissolution of lead and copper from household plumbing. Fluoride is added to help prevent dental problems with children's teeth. Potassium permanganate and powdered activated carbon can be added if necessary to reduce taste and odor sometimes present in the raw water. Treated water is then pumped through the distribution system and to your home.

What Is Found in the Water?

As mentioned previously, tests are periodically conducted for the regulated and unregulated contaminants. The table found in this report is a listing of those that were detected in Hagerstown water during the period from January 1, 2017, to December 31, 2017. The remaining contaminants have not been detected. The regulatory agencies (the State of Maryland and the EPA) have waived the requirement to sample for contaminants that would not normally be found in our environment. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of certain contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

There are a variety of contaminants that may be present in source water: microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; pesticides and herbicides, which may come from a variety of sources such as agricultural, urban storm water runoff, and residential uses; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.

If present, elevated levels of lead or copper can cause serious health problems, especially for pregnant women and young children. Lead and copper in drinking water is primarily from materials and components associated with service lines and home plumbing. The Utilities Department Water Division 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 and copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for cooking. If you are concerned about lead and copper in your drinking water, you may wish to have your water tested. Information on lead and copper in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline at 1-800-426-4791 or on the internet at http://www.epa.gov/safewater/lead.

Certain 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 undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, or infants can be particularly at risk of infection. These people should seek advice about drinking water from their health care provider. The Environmental Protection Agency/Center for Disease Control guidelines for the appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Some maximum contaminant level (MCL) regulations are based on a yearly average of sample results. Occasionally, an individual result may exceed the MCL but the yearly average does not. This is the case with haloacetic acids and trihalomethanes. Not all sample results for HAA5s and TTHMs have been used for calculating the Highest Level Detected because some results are part of an ongoing evaluation to determine where compliance sampling should occur in the future.

Some people who drink water containing haloacetic acids or trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

WATER QUALITY DATA TABLE

Contaminant (units)	MCLG	MCL	Level Found @ Willson	Level Found @ Breichner	Range of Detection	Violation	Typical Sources of Contaminants
Chloramines (measured as Chlorine)	MRDLG 4	MRDL 4	2.8	OFFLINE	2.3-2.8	no	Water additive to control microbes.
Barium (ppm)	2	2	0.041	OFFLINE	-	no	Discharge of drilling wastes, metal refineries and erosion of natural deposits
Fluoride (ppm)	4	4	0.5	OFFLINE	0.52-0.565	no	Additive promoting strong teeth, natural deposits erosion, fertilizer and aluminum factory discharges
Gross Alpha emitters (pCi/l)	0	15	<2	OFFLINE	-	no	Erosion of natural deposits
Radium 228 (pCi/l)	0	5	<0.9	OFFLINE	-	no	Decay of natural and man-made deposits
Copper (ppm)	1.3	AL=1.3	0.0603	OFFLINE	<0.010-0.149	no	Corrosion of household plumbing
Lead (ppb)	0	AL=15	<1.00	OFFLINE	<1.00-1.37	no	Corrosion of household plumbing
Nitrate(ppm)	10	10	0.56	OFFLINE	0-0.56	no	Runoff from fertilizer; Leaching of septic tanks, sewage; Erosion of natural deposits
Total Coliform Bacteria (% of monthly samples)	0	5%	1.1%	OFFLINE	0.0%-1.1%	no	Naturally present in the environment
Haloacetic Acids (ppb) Highest LRAA	0	60	23	OFFLINE	6.98-22.07	no	By-products of drinking water disinfection process
Trihalomethanes (ppb) Highest LRAA	0	80	43	OFFLINE	13.41-64.91	no	By-products of drinking water disinfection process
Turbidity samples below .3 NTU (lowest monthly %)	n/a	95%	100%	OFFLINE	100%	no	Soil runoff
Maximum Turbidity (NTU)	n/a	1	0.032	OFFLINE	0.02-0.032	no	Soil runoff
Unregulated Contaminants							
Perchlorate (ppb)	n/a	n/a	0.62	OFFLINE	n/d-0.62	no	Road flare, explosive, rocket fuel manufacturing
Sodium (ppm)	n/a	n/a	27.8	OFFLINE	-	no	n/a

Source Water Assessment

A Source Water Assessment (SWA) was performed for the Potomac and Edgemont water supplies. The SWA was done to identify potential sources of contamination that include non-point sources, including transportation, agriculture, on-site septic systems, wildlife, and runoff from developed land and timber harvest operations. Recommendations of the SWA include the development of a watershed protection group representing stakeholders, aggressive barrier management plans to control agriculture and animal farming runoff, phosphorus control, and a proactive spill management program. We have completed 24-months of monitoring for the Potomac River Source for *Cryptosporidium* in compliance with the 2nd round of the Long-Term 2 Enhanced Surface Water Treatment Rule. The results of this monitoring confirm that the Potomac River source has a low occurrence of *Cryptosporidium*. The average result of *Cryptosporidium* from January 2016 to December 2017 was 0.046 Oocysts/Liter. These results indicate that the Potomac River source is at low risk of contamination by *Cryptosporidium* and requires no additional treatment techniques.

Is Your Water Safe to Drink?

Hagerstown City Water meets all Federal (EPA) and State (MDE) regulatory requirements. If any of the Maximum Contaminant Levels (MCLs) or reporting requirements were exceeded or violated during the period that this report covers, the health effects and reasons for the violations would be required to be stated in this report.

The Hagerstown Utilities Department Water Division works hard to maintain the highest quality water possible and we will continue to strive for this goal. If you have questions about this report or any other topic related to your drinking water, please feel free to call us at 301-739-8577 x 680.