

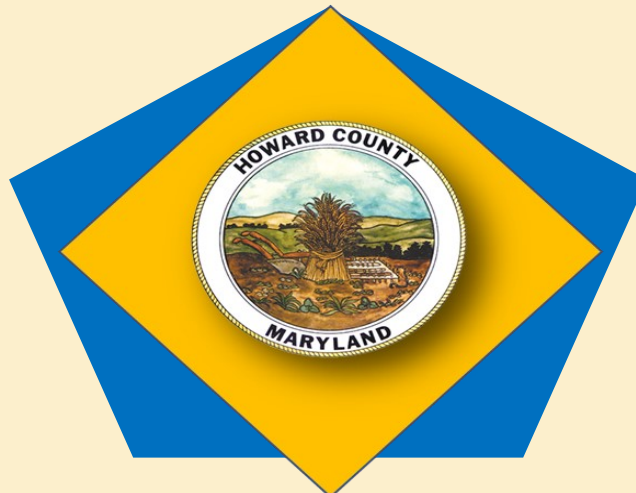
Annual Water Quality Report 2021



Howard County Department of Public Works

Reporting Period January 1, 2020 to December 31, 2020

PSWID 0130002



Howard County Drinking Water



Calvin Ball
Howard County
Executive

We've been reminded over the past year how much time, work and effort goes into our everyday needs, including our access to high-quality drinking water. We don't take these necessities for granted and our Bureau of Utilities is charged with conducting regular tests on our drinking water and publishing their results for the public.

This Consumer Confidence Report is a detailed summary of our community's drinking water quality. You can learn where your water is sourced, and how we ensure it is clean and safe.

We're deeply grateful to our Howard County employees who work to protect our water quality and provide reliable uninterrupted service so that each time we turn on the tap – we know we're drinking clean water.

Sincerely,

Calvin Ball
Howard County Executive



Water is Life

Howard County is pleased to present to you this year's Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. We are committed to ensuring the quality of your water and our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts our water suppliers make to continually improve the water treatment process and protect our water resources.

Our water sources are surface water from the Liberty Reservoir on the North Branch of the Patapsco River, the Loch Raven Reservoir on the mainstream of the Gunpowder Falls River purchased from Baltimore City and surface water from the Patuxent River purchased from the Washington Suburban Sanitary Commission

WHY WATER IS TESTED:

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals, and radioactive substances. As water travels over the land or underground, it can pick up substances or contaminants such as microbes and inorganic and organic chemicals, as well as radioactive substances, resulting from the presence of animals or from human activity. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. However, the presence of contaminants does not necessarily indicate that the water poses a health risk.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities



FOR MORE INFORMATION

If you have any questions about this report or concerning your water quality, please contact Howard County's Bureau of Utilities at 410-313-4900. We want our valued customers to be informed about their water quality. You can also learn more by attending any of our regularly scheduled Department of Public Works Board meetings. For more information about these meetings, please call 410-313-4405.

Our Bureau of Utilities employees work around the clock to provide top quality water to every tap. We ask all our customers to help us protect our water sources, which are the heart of our community, our way of life and our children's future.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) sets regulations that limit the amount of certain contaminants in water provided by public water systems. Whereas, Food and Drug Administration (FDA) regulations set limits for contaminants in bottled water that must provide the same protection for public health.

The Maryland Department of the Environment (MDE) has completed a Source Water Assessment of the water supplies that serve the City of Baltimore and Washington Suburban Sanitary Commission. The Source Water Assessment Program may be viewed on MDE's website at

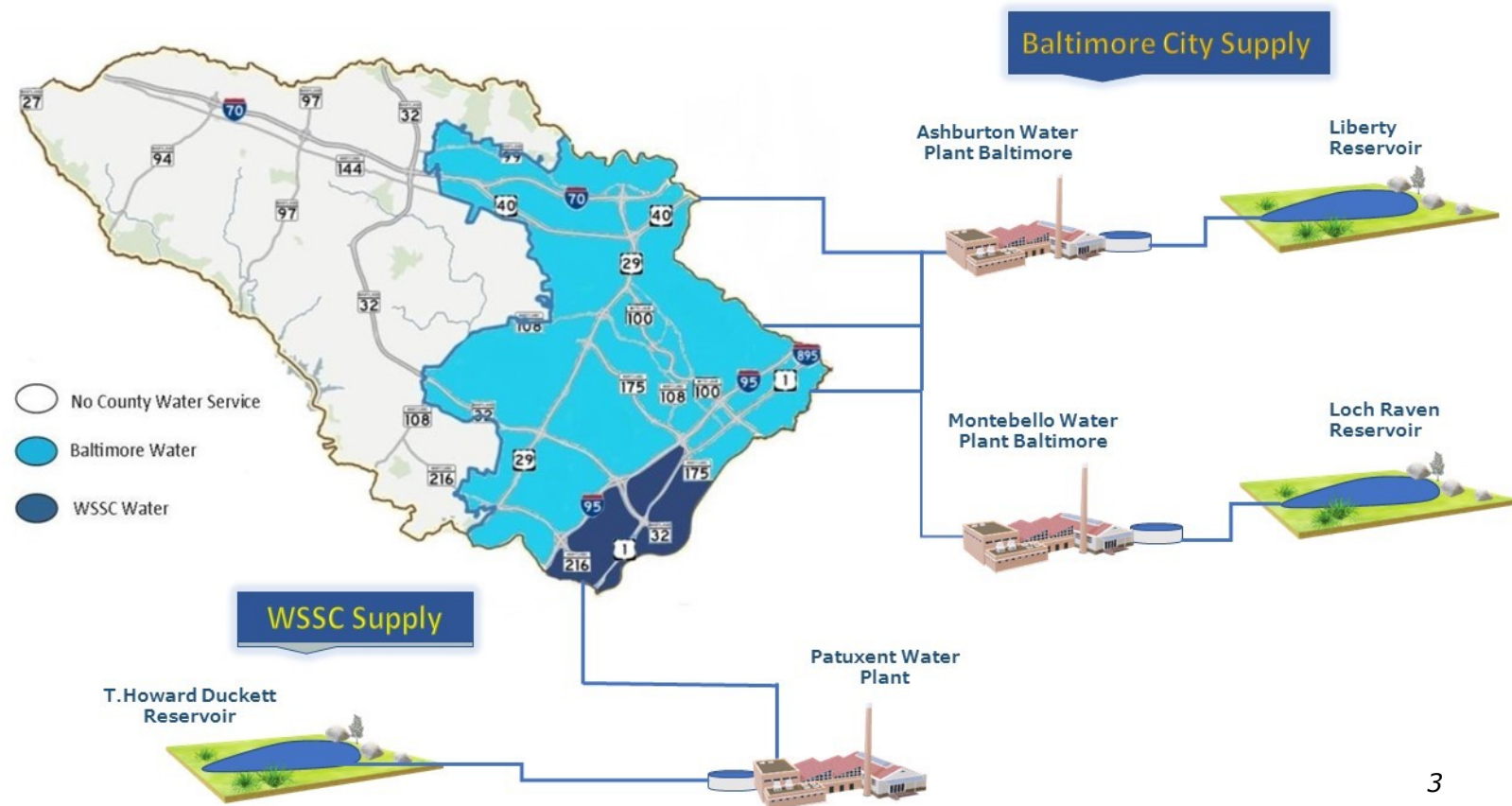
https://mde.maryland.gov/programs/Water/water_supply/Source_Water_Assessment_Program/Pages/index.aspx.

More information about contaminants and potential health effects, call EPA's Safe Drinking Water Hotline at 1-800-426-4791.



WHERE YOUR WATER COMES FROM

If you live in the North Laurel area of Howard County, east of Interstate 95 and south of Patuxent Range Road, your water originates from the Washington Suburban Sanitary Commission (WSSC) in Laurel. If you live anywhere else in Howard County and are connected to the public water supply, your water originates from Baltimore City. As a “Consecutive Water System,” Howard County purchases water from Baltimore City and WSSC. The water quality analyses are performed at Howard County, Baltimore City and WSSC laboratories. The table inside this brochure shows the results of monitoring for the period of January 1, 2020 to December 31, 2020.



TEST RESULTS - HOWARD COUNTY—PSWID 0130002

Contaminant	Violation Y/N	Total Sample Collected	Total Coliform* Positive	E-coli** Positive	E-coli MCLG	Likely Source of Contamination
Microbiological Contaminants						
Routine Samples	N	1802	7	0	0	Naturally present in the environment
Repeat Sample	N	21	0	0	0	Human and animal fecal waste

*Coliform bacteria—naturally present in the environment ** E-coli—pathogen from human and animal fecal waste

Volatile Organic Chemicals						
Substance	MCLG	MCL	Range - Levels Detected	Highest Level Detected	Violation	Major Sources
Chlorine	MRDDL = 4	MRDL = 4	0.6 –0.7 ppm	0.7ppm	No	Water additive used to control microbes
HAA(5)	n/a	60ppb	13.9 - 46 ppb	35ppb	No	Byproduct of drinking water disinfection
Total THM's	n/a	80ppb	21 - 58.5 ppb	50ppb	No	Byproduct of drinking water disinfection

TEST RESULTS – OUR SUPPLIERS

Contaminant Units	Baltimore City Supply				Washington Suburban Sanitary Commission Supply		MCLG	MCL	Likely Source of Contamination
	Violation Y/N	Level Detected	Violation Y/N	Level Detected	Violation Y/N	Level Detected			
	Ashburton Plant		Montebello Plant						

Inorganic Contaminants									
Barium ppm	N	0.0225	N	0.041	N	0.03	2	2	Discharge from drilling waste
Arsenic ppb	N	<2	N	<2	N	ND	0	10	Erosion of natural deposits
Fluoride ppm	N	0.9	N	1.57	N	0.7	4	4	Water additive that promotes strong teeth
Nitrate ppm	N	2.24	N	1.91	N	2.0	0	10	Runoff from fertilizer use; leaching from septic tank, sewage; erosion of natural deposits

Microbiological Contaminants									
Turbidity NTU	N	0.12	N	0.14	N	0.02	1.0	TT= Filtration	Soil runoff

KEY TABLE:

In this table 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 detectable by the analytical instrument used.

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 (ug/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Radioactive Contaminants								
Washington Suburban Sanitary Commission Supply (WSSC)								
Contaminant Units	Violation Y/N	highest Level Detected	Range of Levels of Detected	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Gross Beta pCi/l				N	<4	0	50	Decay of natural and man-made deposits
Gross Alpha pCi/l				N	2.2	0	15	Erosion of Natural deposits
Combine — Ashburton Plant / Montebello Plant								
Combined Radium pCi/l	N	1.6	0.2-1.6			0	5	Erosion of natural deposits

LEAD AND COPPER TESTING - HOWARD COUNTY

Water is below detection levels when it leaves the water treatment plant for lead and copper, but lead and copper can be released when the water comes in contact with pipes and plumbing fixtures in homes and buildings that contain lead and/or copper. The EPA requires testing of the water distribution system for lead and copper at the tap. Howard County is required to sample 50 sites and of these 50 sites, 90 percent of the samples must have lead and copper levels less than the Action Level set by EPA, 0.015 mg/l or 15 parts per billion for lead and 1.3 mg/l or 1.3 parts per million for copper. The results of the sampling in 2020 are shown below. Howard County's lead and copper levels are consistently below the Action Level set by EPA. The next scheduled sampling for lead and copper will be performed during the summer of 2023. For more information about lead in drinking water, visit www.howardcountymd.gov/Departments/Public-Works/Bureau-Of-Utilities/Customer-Service-Division/Lead-in-Drinking-Water.

Contaminant	Action Level	90 th Percentile Value	Source of Contamination
Lead	15 ppb	3 ppb	Corrosion of household plumbing systems
Copper	1.3 ppm	0.13 ppm	Corrosion of household plumbing systems

"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. Our Bureau of Utilities 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 two minutes before using water for drinking or cooking. If you're 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 on the EPA's website at <http://water.epa.gov/drink/info/lead/> or by calling its Safe Drinking Water Hotline at 1-800-426-4791."

Waivers

The Maryland Department of the Environment has granted the City of Baltimore monitoring waivers for the following compounds: 2,3,7,8-TCDD (Dioxin), Endothall, Diquat, Glyphosphate, Asbestos and Cyanide.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 "Maximum Allowed" (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 - the "Goal" (MCLG) is 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 safety.

Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

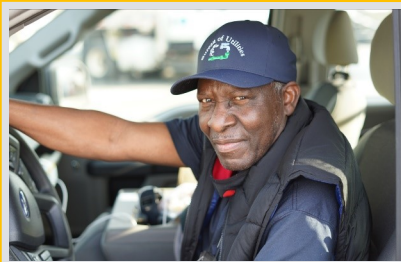
Unregulated Contaminant Monitoring Rule 4

Every five years, under the 1996 Amendments to the Safe Drinking Water Act (SDWA) the EPA issues a list of contaminants that could be present in the public water systems around the country; this is called the Unregulated Contaminant Monitoring Rule (UCMR). Last year, Howard County participated in the fourth round of the latest revision UCMR. From this study, the EPA can use this information to develop regulatory decisions for any contaminants that reach a unsafe level of exposure in the public drinking water supply.

Contaminant	Violation Y/N	Highest Level Detected	Range	MCLG	MCL	Source of Contamination			
UCMR4 Detected Contaminants Howard County									
Manganese ug/L	N	0.72	ND — 1.7	N/A	N/A	Naturally present in the environment			
HAA5 ug/L	N	22.98	5.3—54.17	N/A	N/A	By-product of drinking water disinfection			
HAA6Br ug/L	N	17.74	4.37—55.29	N/A	N/A	By-product of drinking water disinfection			
HAA9 ug/L	N	33.22	6.63—64.39	N/A	N/A	By-product of drinking water disinfection			
ADDITIONAL TEST RESULTS – OUR SUPPLIERS									
Synthetic Organic Contaminants including Pesticides and Herbicides									
2,4-D – ppb	N	<1.0	N	<1.0	N	ND	70	70	Runoff from herbicide used on row crops
2,4,5-TP (Silvex) - ppb	N	<1.0	N	<1.0	N	ND	50	50	Residue of banned herbicide
Alachlor – ppb	N	<2	N	<2	N	ND	0	2	Runoff from herbicide used on row crops
Atrazine – ppb	N	<3	N	<3	N	ND	3	3	Runoff from herbicide used on row crops
Benzo(a)pyrene – ppb	N	<0.2	N	<0.2	N	ND	0	0.2	Leaching from linings of water storage tanks and distribution lines
Carbofuran - ppb	N	<1.0	N	<1.0	N	ND	40	40	Leaching of soil fumigant used on rice and alfalfa
Chlordane - ppb	N	<2	N	<2	N	ND	0	2	Residue of banned termiticide
Dalapon – ppb	N	<4.0	N	<4.0	N	ND	200	200	Runoff from herbicide used on rights of way
Di(2-ethylhexyl) Adipate - ppb	N	<0.5	N	<0.5	N	ND	400	400	Discharge from chemical factories
Di(2-ethylhexyl) Phthalate - ppb	N	<0.96	N	<0.96	N	ND	0	6	Discharge from rubber and chemical factories
Dibromochloropropane -ppb	N	<0.02	N	<0.02	N	ND	0	0.2	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb – ppb	N	<1.0	N	<1.0	N	ND	7	7	Runoff from herbicide used on soybeans and vegetables
Endrin – ppb	N	<0.5	N	<0.5	N	ND	2	2	Residue of banned insecticide

Ethylene dibromide - ppb	N	<0.05	N	<0.05	N	ND	0	0.05	Discharge from petroleum refineries
Heptachlor - ppb	N	<0.4	N	<0.4	N	ND	0	0.4	Residue of banned termiticide
Heptachlor epoxide - ppb	N	<0.2	N	<0.2	N	ND	0	0.2	Breakdown of heptachlor
Hexachlorobenzene - ppb	N	<0.5	N	<0.5	N	ND	0	1	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene - ppb	N	<0.5	N	<0.5	N	ND	50	50	Discharge from chemical factories
Lindane-ppb	N	<0.2	N	<0.2	N	ND	0.2	0.2	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor - ppb	N	<0.5	N	<0.5	N	ND	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]-ppb	N	<1.0	N	<1.0	N	ND	200	200	Runoff from Landfills; discharge of waste chemicals
Pentachlorophenol - ppb	N	<0.2	N	<0.2	N	ND	0	1	Discharge from wood preserving factories
Picloram – ppb	N	<2.0	N	<2.0	N	ND	500	500	Herbicide runoff
Simazine – ppb	N	<0.5	N	<0.5	N	ND	4	4	Herbicide runoff
Volatile Organic Contaminants									
Benzene – ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from factories; leaching from gas storage tanks and Landfills
Carbon tetrachloride - ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from chemical plants And other industrial activities
Chlorobenzene – ppb	N	<0.5	N	<0.5	N	ND	100	100	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene - ppb	N	<0.5	N	<0.5	N	ND	600	600	Discharge from industrial chemical factories
p-Dichlorobenzene - ppb	N	<0.5	N	<0.5	N	ND	75	75	Discharge from industrial chemical factories
1,2 – Dichloroethane - ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from industrial chemical factories
1,1 – Dichloroethane - ppb	N	<0.5	N	<0.5	N	ND	7	7	Discharge from industrial chemical factories
cis-1,2-Dichloroethene - ppb	N	<0.5	N	<0.5	N	ND	70	70	Discharge from industrial chemical Factories
trans-1,2 Dichloroethene - ppb	N	<0.5	N	<0.5	N	ND	100	100	Discharge from industrial chemical factories
Dichloromethane– ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane Ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from industrial chemical factories
Ethylbenzene – ppb	N	<0.5	N	<0.5	N	ND	700	700	Discharge from petroleum refineries
Styrene – ppb	N	<0.5	N	<0.5	N	ND	100	100	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene – ppb	N	<0.5	N	<0.5	N	ND	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
1,2,4-Trichlorobenzene - Ppb	N	<0.5	N	<0.5	N	ND	70	70	Discharge from textile-finishing factories
1,1,1 – Trichloroethane - Ppb	N	<0.5	N	<0.5	N	ND	200	200	Discharge from metal degreasing sites and other factories

1,1,2 –Trichloroethane - Ppb	N	<0.5	N	<0.5	N	ND	3	5	Discharge from industrial chemical factories
Trichloroethene – ppb	N	<0.5	N	<0.5	N	ND	0	5	Discharge from metal degreasing sites and other factories
Vinyl Chloride - ppb	N	<0.5	N	<0.5	N	ND	0	2	Leaching from PVC piping; discharge from plastics factories
Toluene – ppb	N	<0.5	N	<0.5	N	ND	1000	1000	Discharge from petroleum
Xylenes – ppb	N	<0.5	N	<0.5	N	ND	10000	10000	Discharge from petroleum factories; discharge from chemical factories



A Note From Art Shapiro, Chief of The Bureau of Utilities

DEAR VALUED CUSTOMER,

Howard County residents, businesses and visitors continue to benefit from reliable water utility service and enjoy the highest quality drinking water in the region. The challenges of the coronavirus pandemic have been mitigated by the Bureau of Utilities taking effective steps each day to protect public health and ensure safe and reliable water service is provided to our customers. The unusual challenges encountered this past year throughout our region, have necessitated that the Bureau of Utilities implement steps recommended by the CDC and state/local Health Departments to protect the public. Our motivated and well-trained essential staff have remained on continuous duty, promptly repairing broken water mains and addressing damaged service lines. Our core responsibility is to proactively work each day to ensure critical water services are reliably provided on a 24/7 basis. Our mission is to provide high quality, safe and dependable drinking water because it's what our customers expect and deserve. We hope you find this report informative and reassuring. In coordination with our regional water suppliers, the City of Baltimore and the Washington Suburban Sanitary Commission, we constantly strive to deliver the highest quality water supply service. The heightened national focus on preventing the spread of the COVID-19 virus is taken seriously and in Howard County our drinking water systems are expertly assessed for physical condition, proactively maintained to the highest standards and considered for efficient rehabilitation or replacement in our long term capital improvement programming. Please do not hesitate in contacting our Bureau of Utilities team at 410-313-4900 for more information, or visit our up-to-date website at: www.howardcountymd.gov/Departments/Public-Works/Bureau-Of-Utilities.

Art Shapiro, PE, PMP
Chief, Bureau of Utilities

Howard County Government

Department of Public Works

Bureau of Utilities

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Bureau of Utilities' Mission Statement



*Reliable professionals
delivering customer-focused
water services.*