

Howard County Department of Public Works



Annual Water Quality Report

Reporting Period January 1, 2019 to December 31, 2019

PSWID 0130002



Calvin Ball,
Howard County Executive

A handwritten signature in blue ink.

Howard County Drinking Water

Access to clean water is not only a human right but a critical foundation of our society. We don't take our access for granted and work hard every day to ensure high-quality drinking water for all our residents in Howard County. Our Bureau of Utilities is charged with conducting regular tests 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 uninterrupted service so that each time we turn on the tap – we know we're drinking clean water.

Howard County is pleased to present its 2020 Water Quality Report. This report is designed to inform residents about the quality and dependability of water and services provided to them every day. The goal of this report is to help readers better understand the efforts our water suppliers make to continually improve the water treatment process and protect our water resources. The county sources its water from the Liberty Reservoir on the North Branch of the Patapsco River and the Loch Raven Reservoir on the main stream of the Gunpowder Fall from Baltimore City and from the Patuxent River from the Washington Suburban Sanitary Commission. Here in Howard County, we work hard and are committed to ensuring the quality of your water.

DEAR VALUED CUSTOMER,

Our mission here at Howard County's Department of Public Works', Bureau of Utilities is to provide the highest quality, safest and most dependable drinking water to our customers – whether a county resident, business or visitor. In coordination with our regional water suppliers, the City of Baltimore and the Washington Suburban Sanitary Commission, we continuously strive to deliver the finest water supply service, even in times of crisis. In response to the COVID-19 pandemic, here in Howard County, we've taken the necessary steps to ensure we continue to provide reliable water service to our customers in the safest manner possible. This unprecedented time has required us to implement additional steps to protect our dedicated, essential staff members and the county's drinking water system. Our staff remains available 24/7, expertly assessing and maintaining the physical conditions of our water infrastructure, while overseeing our long-term capital improvement programming. We hope that through this report, you will gather a better understanding of our water services and the quality of the product we deliver to you daily. Should you have any questions, please do not hesitate to contact our Bureau of Utilities team at 410-313-4900 or visit us online at www.howardcountymd.gov/Departments/Public-Works/Bureau-Of-Utilities.

Art Shapiro, PE, PMP
Chief, Bureau of Utilities

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, 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. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Contaminants that could 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.

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. Food and Drug Administration 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. The Source Water Assessment Program may be viewed at the MDE web site, http://www.mde.state.md.us/programs/Water/Water_Supply/ConsumerConfidenceReports/Documents/CCR2015/Howard/0130002_Howard_County.pdf.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

FOR MORE INFORMATION

If you have any questions about this report or concerning your water utility, please contact the County's Bureau of Utilities at 410-313-4900. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Department of Public Works Board meetings. Please call 410-313-2330 for further information about these meetings.

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

TEST RESULTS – HOWARD COUNTY - PSWID 0130002									
Contaminant	Violation Y/N	Total Sample Collected	Total Coliform* Positive	E-coli** Positive	E-coli MCLG		E-coli MCLG		
Microbiological Contaminants									
Routine Samples	N	1802	4	0	0		0		0
Repeat Sample	N	12	0	0	0		0		0
*Coliform bacteria—naturally present in the environment ** E-coli—pathogen from human and animal fecal waste									
TEST RESULTS – OUR SUPPLIERS									
	Baltimore City Supply				Washington Suburban Sanitary Commission Supply				
	Ashburton Plant		Montebello Plant						
Contaminant - Units	Violation Y/N	Level Detected	Violation Y/N	Level Detected	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants									
Turbidity - NTU	N	0.06	N	0.21	N	0.03	1.00	TT= Filtration	Soil runoff
Radioactive Contaminants									
Beta/photon emitters	Combined Radium 226/228		N	<4	N	4.6	0	50	Decay of natural and man-made deposits
pCi/l									
Alpha/photon emitters	N	1.6	N	<4	N	ND	0	50	Erosion of natural deposits
pCi/l									
Inorganic Contaminants									
Antimony - ppb	N	<5	N	<5	N	ND	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic - ppb	N	<2	N	<2	N	ND	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass And electronics production wastes
Barium - ppm	N	0.02	N	0.036	N	0.03	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium - ppb	N	<0.5	N	<0.5	N	ND	4	4	Discharge from metal refineries And coal-burning factories; discharge from electrical, aerospace, And defense industries
Cadmium	N	<0.5	N	<0.5	N	ND	5	5	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes
Chromium - ppb	N	<2	N	<2	N	ND	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper - ppm	N	<.002	N	<.002	N	ND	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride - ppm	N	1.03	N	1.07	N	0.7	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead - ppb	N	<2	N	<2	N	ND	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Mercury (inorganic) Ppb	N	<0.5	N	<0.5	N	ND	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen) Ppm	N	2.87	N	1.97	N	1.5	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) Ppm	N	<0.01	N	<0.01	N	ND	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium - ppb	N	<5	N	<5	N	ND	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium - ppb	N	<1	N	<1	N	ND	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
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	<2	N	<2	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

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.

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.

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.

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.

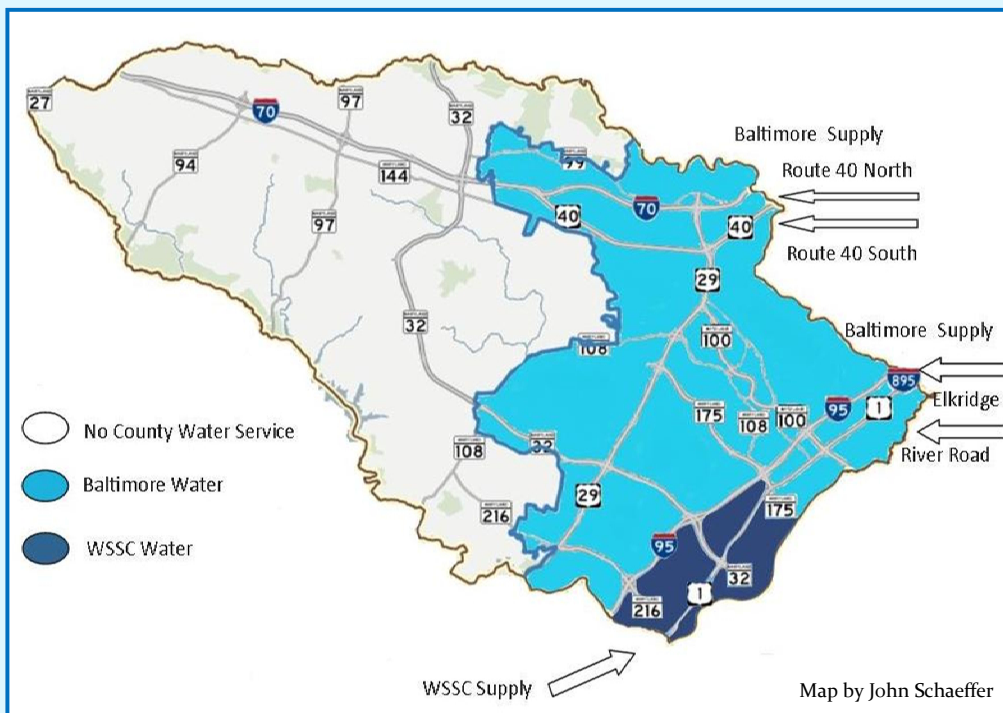
Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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	<1.0	N	<1.0	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	<1.0	N	<1.0	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	1.4	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
Haloacetic Acids, Total- ppb	N	55.0	N	55.0	N	41.0	0	60	By-product of drinking water chlorination
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
TTHM - ppb [Total trihalomethanes]	N	77.0	N	77.0	N	62.0	0	80	By-product of drinking water chlorination
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 factories
Xylenes - ppb	N	<0.5	N	<0.5	N	ND	10000	10000	Discharge from petroleum factories; discharge from chemical factories

TEST RESULTS - HOWARD COUNTY—PSWID 0130002

Volatile Organic Chemicals

Substance	MCLG	MCL	Range (LRAA)	Average	Violation	Major Sources
Total THM's	60	80ppb	20 - 59.1 ppb	41 ppb	No	Byproduct of drinking water chlorination
HAA(5)	46	60ppb	6.4 - 60.3 ppb	32 ppb	No	Byproduct of drinking water chlorination



WHERE YOUR WATER COMES FROM

If you live in the North Laurel area, east of I-95 and south of Patuxent Range Road, your water originates from the Washington Suburban Sanitary Commission 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 its water from Baltimore City and the Washington Suburban Sanitary Commission. Most of the analyses are performed at their water quality laboratories. The table inside this brochure shows the results of monitoring for the period of January 1st to December 31st, 2019.

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 51 sites and of these 51 sites, 90% 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 2014 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 2020. Check out our web page specific to lead in drinking water at: <https://www.howardcountymd.gov/Departments/Public-Works/Bureau-Of-Utilities/Customer-Service-Division/Lead-in-Drinking-Water>

Contaminant	Action Level	90 th Percentile Value
Lead	15 ppb	0.11 ppb
Copper	1.3 ppm	0 ppm

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. Howard County's Bureau of Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in private property 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 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://water.epa.gov/drink/info/lead/>.

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, 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 microbiological contaminants are available from the 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.