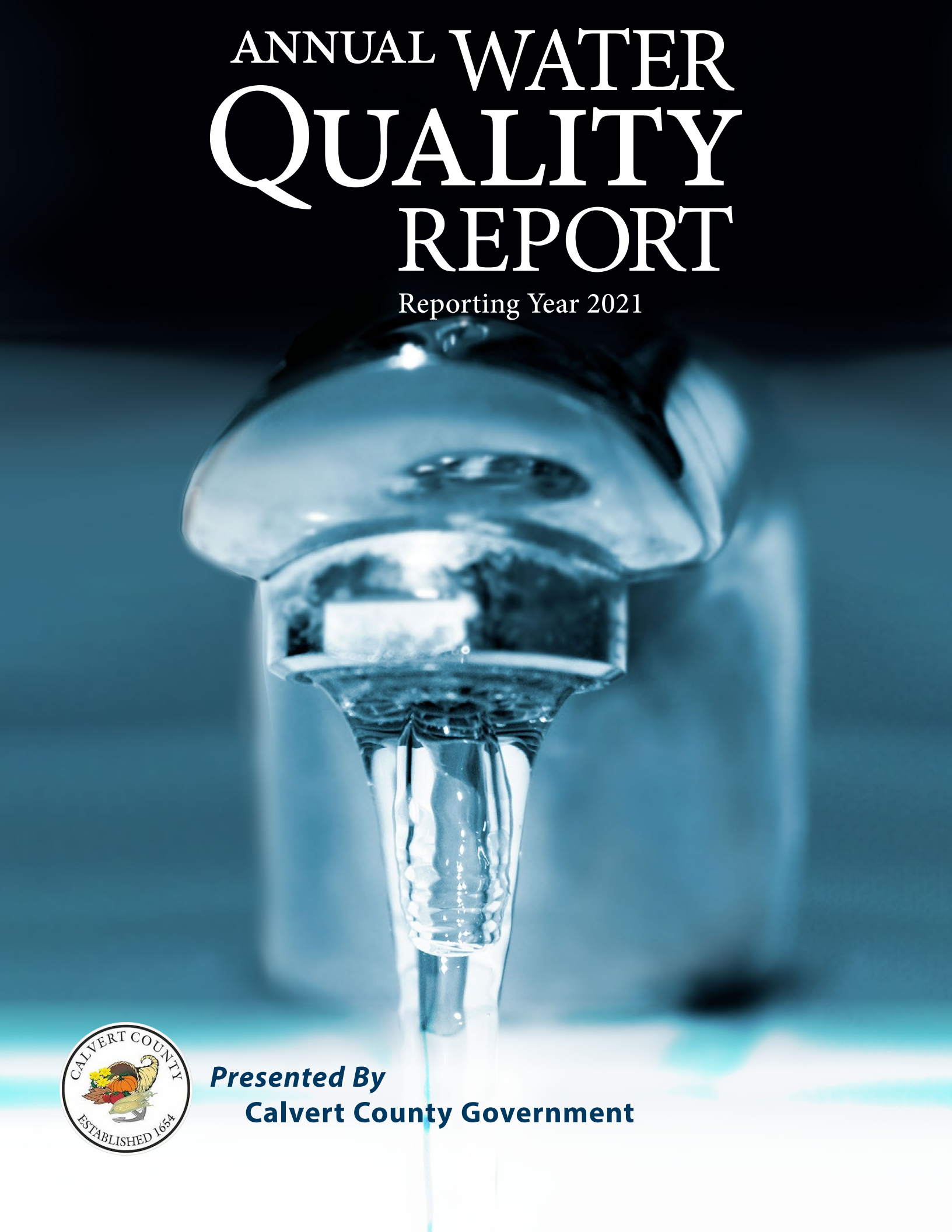
ANNUAL WATER QUALITY REPORT

Reporting Year 2021



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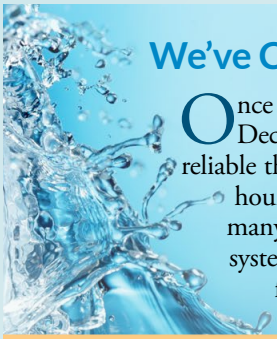
Calvert County Government



We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between Jan. 1 and Dec. 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Where Does My Water Come From?

The county operates multiple public water systems, as illustrated on the map on page 3 of this report. The Calvert County water systems are supplied by wells in the Aquia, Piney Point, Nanjemoy, Magothy and Low Patapsco aquifers. The water is chlorinated to ensure bacteriological purity, and in some systems, phosphate is used to sequester nuisance metals like iron. After treatment, the finished water enters the distribution system. It is delivered to approximately 5,470 customers throughout Calvert County. The water distribution systems are comprised of more than 100 miles of water mains, 750 fire hydrants, 14 elevated storage tanks, seven hydropneumatic tanks and various components that make it possible for the finished water to be delivered to the county's residential, institutional, industrial and commercial customers.

> "When the well is dry, we know the worth of water."
>
> —*Benjamin Franklin*

Important Health Information

While your drinking water meets U.S. Environmental Protection Agency's (EPA's) standard for arsenic, it does contain low levels of arsenic. U.S. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit https://bit.ly/3IeRyXy.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Laboratory Technician II, Tracey Luskey, at 410-535-1600, ext. 8090.

Source Water Assessment

The Maryland Department of the Environment's Water Supply Program (WSP) has conducted Source Water Assessments for water systems in Calvert County. The required components of this report as described in Maryland's Source Water Assessment Program (SWAP) are: 1) delineation of an area that contributes water to the source; 2) identification of potential sources of contamination; and 3) determination of the susceptibility of the water supply to contamination.

Cavalier Country (PWSID 0040002) - 1435 Knight Ave., Dunkirk

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Cavalier Country water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, the water source in this area contains a significant concentration of iron. An iron filtration system was installed in 2018 to mediate levels of lead in the drinking water.

Chesapeake Heights (PWSID 0040018) - 4106 Cassell Blvd., Prince Frederick

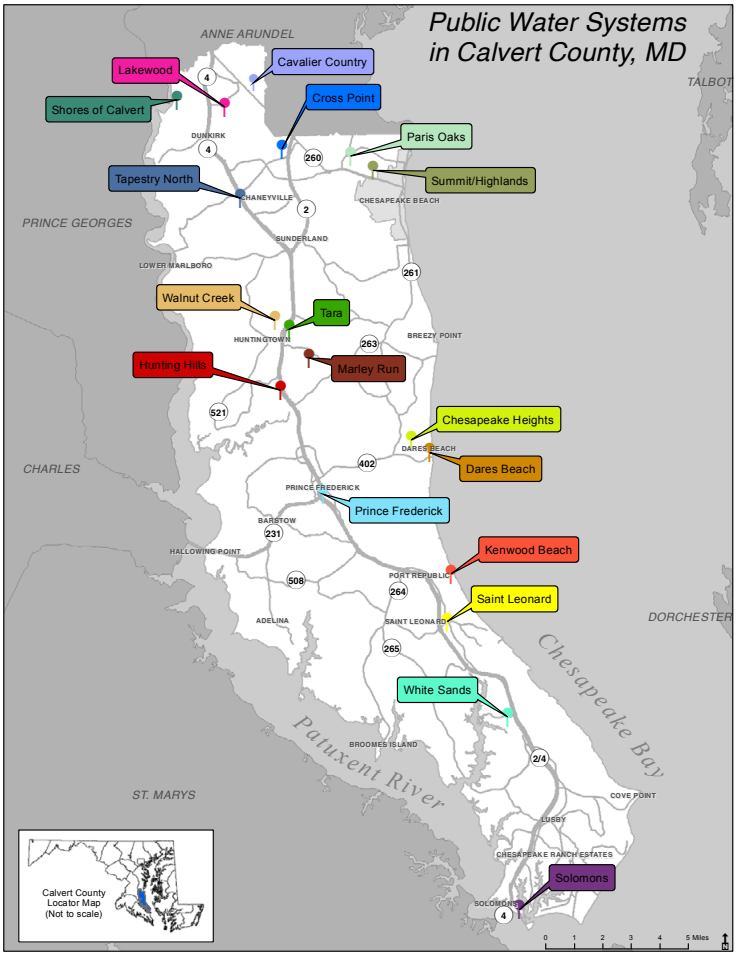
The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Chesapeake Heights water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the maximum contaminant level (MCL) of 10 ppb. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Cross Point (PWSID 0040052) - 9716 Cross Point Drive, Dunkirk

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Cross Point subdivision water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Dares Beach (PWSID 0040005) - Virginia St., Prince Frederick

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Dares Beach water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.



Hunting Hills (PWSID 0040006) - 27 Well St., Huntingtown

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Hunting Hills water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Kenwood Beach (PWSID 0040007) - 3365 North Ave., Port Republic

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Kenwood Beach water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon, a naturally occurring element, will depend upon the final MCL that is adopted for this contaminant.

Lakewood (PWSID 0040013) - 11208 Oakwood Drive, Dunkirk

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Lakewood water supply is not susceptible to contaminants

originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant

Marley Run (PWSID 0040053) - 671 Cox Road, Huntingtown

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Marley Run water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. The running annual average for arsenic is reported non-detectable for the year. This refers to the highest running average that would include data from the previous year. Although this system was under the action levels, a new Arsenic Removal System was added to the process in October 2017 to reduce arsenic levels. Since the installation of the new removal system, arsenic levels have been in the non-detectable range. This water system is tested quarterly for arsenic levels.

Paris Oaks (PWSID 0040010) - 5th St., Owings

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Paris Oaks water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant

Prince Frederick (PWSID 0040011) - 755 Solomon's Island Road and 1520 Mason Court, Prince Frederick

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Prince Frederick water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Shores of Calvert (PWSID 0040015) - 11637 Rivershore Drive, Dunkirk

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Shores of Calvert water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon, a naturally occurring element, will depend upon the final MCL that is adopted for this contaminant.

Solomons (PWSID 0040027) - 12655 H.G. Truman Road and 13885 Dowell Road, Dowell

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Solomons water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

St. Leonard (PWSID 0040013) - 200 Calvert Beach Road, St. Leonard

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the St. Leonard water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels.

Summit/Highlands (PWSID 0040026) - 2812 Waterford Way, Chesapeake Beach

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Summit/Highlands water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. The susceptibility of the water supply to radon, a naturally occurring element, will depend upon the final MCL that is adopted for this contaminant.

Tapestry North (PWSID 0040205) - 2175 Haley's Way, Dunkirk

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Tapestry North subdivision water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers.

Tara (PWSID 0040034) - 13 Scarlett Drive, Huntingtown

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Tara subdivision water supply is not susceptible to contaminants originating at the land surface

Source Water Assessment *continued...*

because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Walnut Creek (PWSID 0040035) - 334 Cross Creek Drive, Huntingtown

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the Walnut Creek water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. This water system is tested quarterly for arsenic levels. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

White Sands (PWSID 0040017) - 350 Laurel Drive, Lusby

The susceptibility analysis is based on a review of the existing water quality data for each water system, the presence of potential sources of contamination in the individual assessment areas, well integrity and aquifer characteristics. It was determined that the White Sands water supply is not susceptible to contaminants originating at the land surface because of the protected nature of confined aquifers. However, it has been determined that arsenic, a naturally occurring contaminant, does pose a risk to the water supply when the arsenic contraction exceeds the MCL of 10 ppb. The susceptibility of the water supply to radon will depend upon the final MCL that is adopted for this contaminant.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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 or wildlife;

Inorganic contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff and residential uses;

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff and septic systems;

Radioactive contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

				Cavalier Country		Chesapeake Heights		Cross Point			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	6	6–6	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	NA	NA	4	4–4	2[3]	2–2[3]	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	0.059	0.059–0.059	0.047	0.047–0.047	0.055[3]	0.055–0.055[3]	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters[5] (pCi/L)	2020	50	0	4	4–4	8.7	8.7–8.7	6.9[6]	6.9–6.9[6]	No	Decay of natural and man-made deposits
Chlorine (ppm)	2021	[4]	[4]	1.3	1–1.3	1.4	1.3–1.4	1.4	0.9–1.4	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	1.7	1.7–1.7	0.3	0.3–0.3	NA	NA	No	Erosion of natural deposits
Ethylbenzene (ppb)	2017	700	700	NA	NA	NA	NA	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2020	4	4	0.22	0.22–0.22	ND	ND	0.21[4]	0.21–0.21[4]	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	6.4	6.4–6.4	2	1.8–2	3.3	3.3–3.3	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	14.8	14.8–14.8	5	5.3–5.3	1.6	1.6–1.6	No	By-product of drinking water disinfection

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Dares Beach AMOUNT DETECTED	Dares Beach RANGE LOW-HIGH	Hunting Hills AMOUNT DETECTED	Hunting Hills RANGE LOW-HIGH	Kenwood Beach AMOUNT DETECTED	Kenwood Beach RANGE LOW-HIGH	Lakewood AMOUNT DETECTED	Lakewood RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	NA	NA	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	8[4]	7–8[4]	7[4]	6–7[4]	3[1]	3–3[1]	NA	NA	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	NA	NA	NA	NA	NA	NA	NA	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters[5] (pCi/L)	2020	50	0	4.7	4.7–4.7	12.4	12.4–12.4	10[3]	10–10[3]	7.5	7.5–7.5	No	Decay of natural and man-made deposits
Chlorine (ppm)	2021	[4]	[4]	1.2	1.1–1.2	1	0.9–1	1.3	1–1.3	1.1	0.9–1.1	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	0.6	0.6–0.6	0.4	0.4–0.4	NA	NA	NA	NA	No	Erosion of natural deposits
Ethylbenzene (ppb)	2017	700	700	NA	NA	NA	NA	NA	NA	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2020	4	4	0.25[1]	0.25–0.25[1]	NA	NA	0.34[1]	0.34–0.34[1]	0.21[1]	0.21–0.21[1]	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	3	3.2–3.2	1.2	1.2–1.2	4.8	4.8–4.8	1.3	1.3–1.3	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	8	7.7–7.7	4.6	4.6–4.6	16.5	16.5–16.5	4	4–4	No	By-product of drinking water disinfection

REGULATED SUBSTANCES

				Marley Run		Paris Oaks		Prince Frederick		Shores of Calvert			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	NA	NA	NA	NA	NA	NA	2.7[1]	2.7–2.7[1]	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	NA	NA	3[1]	3–3[1]	6[4]	4–6[4]	NA	NA	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	NA	NA	0.137[1]	0.137–0.137[1]	0.01[4]	0.01–0.01[4]	0.044[1]	0.044–0.044[1]	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters[5] (pCi/L)	2020	50	0	10.8[4]	10.8–10.8[4]	6.7[6]	6.7–6.7[6]	11.6	8–11.6	4.9[7]	4.9–4.9[7]	No	Decay of natural and man-made deposits
Chlorine (ppm)	2021	[4]	[4]	1.1	0.7–1.1	1.8	1.6–1.8	0.9	0.8–0.9	1.5	1.2–1.5	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	NA	NA	NA	NA	0.4	0.3–0.4	2.6[1]	2.6–2.6[1]	No	Erosion of natural deposits
Ethylbenzene (ppb)	2017	700	700	NA	NA	NA	NA	0.61	0.61–0.61	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2020	4	4	0.17[1]	0.17–0.17[1]	0.25[1]	0.25–0.25[1]	0.21[4]	0.21–0.21[4]	0.25[1]	0.25–0.25[1]	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	1.7	1.7–1.7	4.7	4.7–4.7	1	1.2–1.2	10.4	10.4–10.4	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	2.5	2.5–2.5	10.9	10.9–10.9	8	8.3–8.3	14.1	14.1–14.1	No	By-product of drinking water disinfection

REGULATED SUBSTANCES

				Solomons		St. Leonard		Summit/Highland		Tapestry North			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	NA	NA	NA	NA	5.5[2]	5.5–5.5[2]	1.2[1]	1.2–1.2[1]	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	5[1]	4–5[1]	5[4]	4–5[4]	NA	NA	4[3]	4–4[3]	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	NA	NA	0.056[1]	0.056–0.056[1]	0.113[1]	0.113–0.113[1]	NA	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters[5] (pCi/L)	2020	50	0	4.9[3]	4.9–4.9[3]	15.9[6]	15.9–15.9[6]	4.6	4.6–4.6	NA	NA	No	Decay of natural and man-made deposits
Chlorine (ppm)	2021	[4]	[4]	0.7	0.6–0.7	0.9	0.9–0.9	1.3	1.2–1.3	1.4	1.2–1.4	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	0.8	0.8–0.8	NA	NA	10	10–10	1.2[1]	1.2–1.2[1]	No	Erosion of natural deposits
Ethylbenzene (ppb)	2017	700	700	NA	NA	NA	NA	NA	NA	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2020	4	4	0.36[1]	0.35–0.36[1]	0.27[1]	0.27–0.27[1]	0.36[1]	0.36–0.36[1]	0.2[3]	0.2–0.2[3]	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	1	1–1	5[3]	5–5[3]	1	1.4–1.4	3	3–3	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	11	10.8–10.8	4.9	4.9–4.9	6	6–6	5.8	5.8–5.8	No	By-product of drinking water disinfection

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Tara AMOUNT DETECTED	Tara RANGE LOW-HIGH	Walnut Creek AMOUNT DETECTED	Walnut Creek RANGE LOW-HIGH	White Sands AMOUNT DETECTED	White Sands RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	9[4]	6–7[4]	7[4]	6–7[4]	5[1]	0–5[1]	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	NA	NA	NA	NA	NA	NA	No	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters[5] (pCi/L)	2020	50	0	8.9[4]	8.9–8.9[4]	9.2	9.2–9.2	13.4	13.4–13.4	No	Decay of natural and man-made deposits
Chlorine (ppm)	2021	[4]	[4]	1.3	1.1–1.3	1.5	1.1–1.5	1	0.7–1	No	Water additive used to control microbes
Combined Radium (pCi/L)	2020	5	0	NA	NA	0.1	0.1–0.1	1.1	1.1–1.1	No	Erosion of natural deposits
Ethylbenzene (ppb)	2017	700	700	NA	NA	NA	NA	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2020	4	4	0.21[4]	0.21–0.21[4]	0.2[1]	0.2–0.2[1]	0.3[1]	0.3–0.3[1]	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	4	4–4	3.3	3.3–3.3	3.3	3.3–3.3	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	13.3	13.3–13.3	6	6–6	9.5	9.5–9.5	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Cavalier Country AMOUNT DETECTED (90TH %ILE)	Cavalier Country SITES ABOVE AL/ TOTAL SITES	Chesapeake Heights AMOUNT DETECTED (90TH %ILE)	Chesapeake Heights SITES ABOVE AL/ TOTAL SITES	Cross Point AMOUNT DETECTED (90TH %ILE)	Cross Point SITES ABOVE AL/ TOTAL SITES	Dares Beach AMOUNT DETECTED (90TH %ILE)	Dares Beach SITES ABOVE AL/ TOTAL SITES	Hunting Hills AMOUNT DETECTED (90TH %ILE)	Hunting Hills SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.12	0/6	0.093	0/10	0.386	0/7	0.062	0/11	0.107	0/6	No	Corrosion of household plumbing systems; Eerosion of natural deposits
Lead (ppb)	2020	15	0	ND	0/6	ND	0/10	4	0/7	ND	0/11	1	0/6	No	Lead services lines, corrosion of household plumbing systems including fittings and fixtures; erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Kenwood Beach AMOUNT DETECTED (90TH %ILE)	Kenwood Beach SITES ABOVE AL/ TOTAL SITES	Lakewood AMOUNT DETECTED (90TH %ILE)	Lakewood SITES ABOVE AL/ TOTAL SITES	Marley Run AMOUNT DETECTED (90TH %ILE)	Marley Run SITES ABOVE AL/ TOTAL SITES	Paris Oaks AMOUNT DETECTED (90TH %ILE)	Paris Oaks SITES ABOVE AL/ TOTAL SITES	Prince Frederick AMOUNT DETECTED (90TH %ILE)	Prince Frederick SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.050	0/6	0.148	0/7	0.225	0/5	0.130	0/5	0.094	0/22	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	ND	0/6	3	0/7	ND	0/5	ND	0/5	ND	0/22	No	Lead services lines, corrosion of household plumbing systems including fittings and fixtures; erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Shores of Calvert AMOUNT DETECTED (90TH %ILE)	Shores of Calvert SITES ABOVE AL/ TOTAL SITES	Solomons AMOUNT DETECTED (90TH %ILE)	Solomons SITES ABOVE AL/ TOTAL SITES	St. Leonard AMOUNT DETECTED (90TH %ILE)	St. Leonard SITES ABOVE AL/ TOTAL SITES	Summit/Highland AMOUNT DETECTED (90TH %ILE)	Summit/Highland SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.279	0/5	0.023	0/24	0.054	0/5	0.260	0/11	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	ND	0/5	ND	0/24	ND	0/5	ND	0/11	No	Lead services lines, corrosion of household plumbing systems including fittings and fixtures; erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Tapestry North AMOUNT DETECTED (90TH %ILE)	Tapestry North SITES ABOVE AL/ TOTAL SITES	Tara AMOUNT DETECTED (90TH %ILE)	Tara SITES ABOVE AL/ TOTAL SITES	Walnut Creek AMOUNT DETECTED (90TH %ILE)	Walnut Creek SITES ABOVE AL/ TOTAL SITES	White Sands AMOUNT DETECTED (90TH %ILE)	White Sands SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.055	0/8	0.231	0/5	0.103	0/5	0.094[4]	0/7[4]	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	4	0/8	ND	0/5	ND	0/5	2[4]	0/7[4]	No	Lead services lines, corrosion of household plumbing systems including fittings and fixtures; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	Cavalier Country AMOUNT DETECTED	Cavalier Country RANGE LOW-HIGH	Chesapeake Heights AMOUNT DETECTED	Chesapeake Heights RANGE LOW-HIGH	Cross Point AMOUNT DETECTED	Cross Point RANGE LOW-HIGH	Dares Beach AMOUNT DETECTED	Dares Beach RANGE LOW-HIGH	Hunting Hills AMOUNT DETECTED	Hunting Hills RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (ppm)	2020	2.0	NA	0.22	0.22–0.22	NA	NA	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	Kenwood Beach AMOUNT DETECTED	Kenwood Beach RANGE LOW-HIGH	Lakewood AMOUNT DETECTED	Lakewood RANGE LOW-HIGH	Marley Run AMOUNT DETECTED	Marley Run RANGE LOW-HIGH	Paris Oaks AMOUNT DETECTED	Paris Oaks RANGE LOW-HIGH	Prince Frederick AMOUNT DETECTED	Prince Frederick RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.0	NA	0.042	0.007–0.059	NA	NA	NA	NA	NA	NA	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (ppm)	2020	2.0	NA	NA	NA	0.21[1]	0.21–0.21[1]	0.17[1]	0.17–0.17[1]	NA	NA	NA	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	Shores of Calvert AMOUNT DETECTED	Shores of Calvert RANGE LOW-HIGH	Solomons AMOUNT DETECTED	Solomons RANGE LOW-HIGH	St. Leonard AMOUNT DETECTED	St. Leonard RANGE LOW-HIGH	Summit/Highland AMOUNT DETECTED	Summit/Highland RANGE LOW-HIGH	Tapestry North AMOUNT DETECTED	Tapestry North RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (ppm)	2020	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	Tara AMOUNT DETECTED	Tara RANGE LOW-HIGH	Walnut Creek AMOUNT DETECTED	Walnut Creek RANGE LOW-HIGH	White Sands AMOUNT DETECTED	White Sands RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.0	NA	NA	NA	NA	NA	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride (ppm)	2020	2.0	NA	NA	NA	NA	NA	NA	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

[1] Sampled in 2019.
[2] Sampled in 2020.
[3] Sampled in 2018.
[4] Sampled in 2021.
[5] The MCL for beta particles is 4 mrem/year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
[6] Sampled in 2015.

Definitions

90th percentile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

PFAS

PFAS – short for per- and polyfluoroalkyl substances – refers to a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, including stain and water resistant fabrics and carpeting, cleaning products, paints, cookware, food packaging and fire-fighting foams. These uses of PFAS have led to PFAS entering our environment, where they have been measured by several states in soil, surface water, groundwater and seafood. Some PFAS can last a long time in the environment and in the human body and can accumulate in the food chain.

The following water systems were tested for the presence of PFAS: Cavalier Country, Chesapeake Heights, Cross Point Subdivision, Dares Beach, Hunting Hills, Kenwood Beach, Lakewood, Marley Run, Prince Frederick, Shores of Calvert, Solomons, St. Leonard, Tapestry North, Tara Subdivision, Walnut Creek and White Sands.

Currently, there are no federal regulations (i.e., Maximum Contaminant Levels (MCLs)) for PFAS in drinking water. However, the U.S. Environmental Protection Agency (EPA) has issued a Health Advisory Level (HAL) of 70 parts per trillion (ppt) for the sum of PFOA and PFOS concentrations in drinking water. While not an enforceable regulatory standard, when followed, the EPA HAL does provide drinking water customers, even the most sensitive populations, with a margin of protection from lifetime exposure to PFOA and PFOS in drinking water. Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. **The combined PFOA and PFAS concentration from samples taken from our water systems was below the detection limit.** MDE anticipates that EPA will establish an MCL for PFOA and PFOS in the near future. This would entail additional monitoring. Additional information about PFAS can be found on the MDE website: mde.maryland.gov.

White Sands Reporting Violation

We failed to submit our report to MDE within 10 days after the end of the monitoring period of January – June 2021. The report was due to MDE by July 10, 2021, and the report was received by MDE on July 13, 2021.