

# Drinking Water Quality Report - Calendar Year 2022

## U.S. Army Garrison Aberdeen Proving Ground South

### **Your water is safe to drink.**

This report summarizes the 2022 water quality information and shows that the U.S. Army Garrison Aberdeen Proving Ground South (APG South) met all regulatory requirements. We are pleased to present this year's annual water quality report as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

### **Where does my water come from?**

APG South purchases water from the Harford County Department of Public Works. Harford County's water comes from a combination of sources, including Loch Raven Reservoir, Susquehanna River, and wells.

### **Source water assessment and its availability**

The Maryland Department of Environment (MDE) completed a source water assessment in 2008 for Harford County's source water.

Potential sources of contamination for the wells are agricultural land use, underground storage tanks, ground water contamination sites, and commercial/industrial sites.

Potential sources of contamination for the Susquehanna River are agricultural land use, urban/residential development, boating activities, sewage effluent, major transportation corridors (highways, railroads) and nuclear power generating plants.

Potential sources of contamination for Loch Raven Reservoir are public and private sewage systems, storm runoff from agricultural and developed areas, and spillage of hazardous materials.

Source water assessment reports are available from [https://mde.maryland.gov/programs/water/water\\_supply/Source\\_Water\\_Assessment\\_Program/Pages/ha.aspx](https://mde.maryland.gov/programs/water/water_supply/Source_Water_Assessment_Program/Pages/ha.aspx).

### **Why are there contaminants in my drinking water?**

Drinking water, including bottled water, may reasonably be 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.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 800-426-4791.



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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances may include 1) microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; 2) inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or

farming; 3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; 4) 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 stormwater runoff, and septic systems; and 5) radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) have regulations that establish limits for contaminants in bottled water that must provide the same protection for public health.

### **Do I need to take special precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those 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. Guidelines from the EPA and the Center for Disease Control (CDC) on appropriate means to lessen the risk of infection from *Cryptosporidium* and other microbial contaminants are available by calling the Safe Water Drinking Hotline.

### **Discolored Water**

Discolored water can be a common complaint in water distribution systems with aging water pipe lines, such as APG South, and is usually due to iron and/or manganese particles being released from the pipes. Although it is aesthetically unpleasant, it is not harmful to drink. Disturbances in water lines can cause discolored water. For example, if water crews have rerouted water to repair a water main line, shut off water lines in a nearby area, are flushing water main lines, or if there is an increased use for firefighting activities, this may cause a red/brown/yellow tinge to the water. If discolored water is evident, flush the taps until the water runs clear. Depending on the size of the building, this may take a considerable amount of time; up to 20 or 30 minutes.



### **How can I get involved?**

Other means of communication and community outreach regarding APG drinking water are as follows:

- Public Works Service Desk: 410-306-1400
- Military Housing (Corvias): 410-305-1076
- DPW Environmental Water Program Team Water Quality Hotline: 410-417-3794
- APG Installation: <https://home.army.mil/apg> with various links under 'Connect with us', including APG's Facebook and Twitter pages
- DoD's Interactive Customer Evaluation (ICE)
- APG Community Exchange (ACE) held quarterly at Top of the Bay, as announced on APG's website under 'Community'

### **Lead Information**

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. APG South Water Distribution System is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the DPW Water Team at 410-278-0750. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

## PFAS Information

PFAS, or Per- and Poly-FluoroAlkyl 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.

Beginning in 2020, the Maryland Department of the Environment (MDE) initiated a PFAS monitoring program. PFOA and PFOS are two of the most prevalent PFAS compounds. PFOA concentrations from samples taken from the water system in 2022 ranged from 1.27 - 1.60 parts per trillion (ppt). PFOS concentrations from samples taken from our water system in 2022 ranged from 1.57 - 2.47 ppt.

In March 2023, EPA announced proposed Maximum Contaminant Levels (MCLs) of 4 ppt for PFOA and 4 ppt for PFOS, and a Group Hazard Index for four additional PFAS compounds. Future regulations would require additional monitoring as well as certain actions for systems above the MCLs or Hazard Index.

EPA will publish the final MCLs and requirements by the end of 2023 or beginning of 2024. Additional information about PFAS can be found on the MDE website:  
[mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx](https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx).

## Water Quality Data Table

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA and/or MDE requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or because the system is not considered to be vulnerable to these certain types of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

## APG SOUTH WATER QUALITY DATA

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
<b>Disinfectants &amp; Disinfection By-Products</b>							
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)							
Chlorine (ppm)	4	4	.5	0.4	.5	No	Water additive used to control microbes
Haloacetic Acids (HAA5s)( ppb)	NA	60	12 <sup>1</sup>	1.6 <sup>2</sup>	19.9 <sup>2</sup>	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb)	NA	80	35 <sup>1</sup>	11.8 <sup>2</sup>	36.6 <sup>2</sup>	No	By-product of drinking water disinfection
<sup>1</sup> The maximum Locational Running Annual Average (LRAA) of analytical results for samples at a particular monitoring location during the previous 4 calendar quarters. <sup>2</sup> The minimum/maximum individual analytical results from 2022.							

Contaminants	MCLG	AL	Your Water	# Samples Exceeding AL	Violation	Typical Source
<b>Metal Contaminants</b>						
Copper (ppb) (2021)	1300	1300	448	0	No	Corrosion of plumbing systems, erosion of natural deposits
Lead (ppb) (2021)	0	15	3.1	0	No	Corrosion of plumbing systems, erosion of natural deposits
Lead and copper results are from 2021. Testing for these metals is conducted triennially; once every three years. The next tests will be performed in 2024.						

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
<b>Microbiological Contaminants</b>							
Total Coliform (5% positive samples/month)	0	0	0	NA	NA	No	Naturally present in the environment (zero positive samples of 120 collected)

## HARFORD COUNTY WATER QUALITY DATA

We are required to provide you with water quality data for all sources of your drinking water. The table below lists the contaminants that were detected in Harford County drinking water during Calendar Year 2022. Harford County's annual Water Quality Reports are posted at [www.harfordcountymd.gov](http://www.harfordcountymd.gov).

Disinfectants & Disinfection By-Products	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Chlorine (ppm)	4	4	3.1	.1	3.1	No	Water additive used to control microbes. Avg = 1.56
HAA5s (ppb)	NA	60	28 <sup>1</sup>	9.9 <sup>2</sup>	37.3 <sup>2</sup>	No	By-product of drinking water chlorination
TTHMs (ppb)	NA	80	40 <sup>1</sup>	8.9 <sup>2</sup>	56.0 <sup>2</sup>	No	By-product of drinking water chlorination
<sup>1</sup> The maximum Locational Running Annual Average (LRAA) of analytical results for samples at a particular monitoring location during the previous four calendar quarters.							
<sup>2</sup> The minimum/maximum individual analytical results from 2022.							

Lead and Copper	MCLG	AL	Your Water	# Samples Exceeding AL	Violation	Typical Source
Copper (ppb) (2020)	NA	13	250	0	No	Corrosion of plumbing systems, erosion of natural deposits
Lead (ppb) (2020)	NA	15	< 1.0	0	No	Corrosion of plumbing systems, erosion of natural deposits

Organic Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Atrazine (ppb)	3	3	.25	ND	.25	No	Agricultural herbicide runoff, used in row crops
Total Organic Carbon (ppm)	NA	TT	Compliance level % removal ranges from 0.78 – 2.83	.96	2.57	No	Naturally present in the environment

Inorganic Contaminants	MCLG	MCL	Range			Violation	Typical Source
			Your Water	Low	High		
Barium (ppm)	2	2	0.11	ND	0.11	No	Discharge of drilling wastes or metal refineries, erosion of natural deposits
Antimony (ppb)	6	6	.5	ND	.5	No	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder
Chromium (ppb)	100	100	2.00	ND	2.00	No	Discharge from steel and pulp mills, erosion of natural deposits
Fluoride (ppm)	4	4	.8	ND	.8	No	Water additive that promotes strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories. Avg. = 0.59
Nitrate (ppm as Nitrogen)*	10	10	3.5	1.3	3.5	No	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits

\* Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Microbiological Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Total Coliform (5% positive samples/month)	0%	5%	0%	0%	0%	No	Naturally present in the environment (zero positive samples out of 1,440 collected)
Turbidity (NTU)	NA	TT	100%	0.014	0.276	No	Soil runoff. Avg = 0.04 NTU.

100% of the turbidity samples were below the TT level of 0.3 NTU. 95% of tested samples must be ≤0.3 NTU. The highest single measurement was 0.28 NTU. Any measurement in excess of 1 is a violation unless otherwise approved by the state.

Radioactive Contaminants	MCLG	MCL	Range			Violation	Typical Source
			Your Water	Low	High		
Combined Radium (226 & 228) (pCi/L) (2020)	0	5	3.2	3.2	3.2	No	Erosion of natural deposits
Gross Alpha (pCi/L) (2020)	0	15	4.3	4.3	4.3	No	Erosion of natural deposits

EPA considers 50 pCi/L to be the level of concern for beta particles.

Additional Contaminants	State MCL	Avg	Your Water		Violation	Explanation and Comment
			Low	High		
Iron (ppm)	NA	< 0.10	ND	0.151	No	Erosion of natural deposits
Manganese (ppm)	NA	0.019	.018	0.020	No	Erosion of natural deposits
Nickel	NA	.003	ND	.006	No	Corrosion of pipes and fittings, erosion of natural deposits
PFOA (ppt)	NA	< 1.0	ND	1.6	No	Firefighting foams, industrial waste sites
PFOS (ppt)	NA	< 1.0	ND	2.5	No	Firefighting foams, industrial waste sites
PFBS (ppt)	NA	< 1.0	ND	2.1	No	Firefighting foams, industrial waste sites
PFHxS (ppt)	NA	< 1.0	ND	2.2	No	Firefighting foams, industrial waste sites
Sodium (ppm)	NA	31.6	13.5	75.2	No	Erosion of natural deposits, sodium salts used in water treatment

Raw Water Contaminants	MCLG	MCL	Your Water		Violation	Explanation and Comment
			Low	High		
Cryptosporidium (oocyst/liter)	0	TT	ND	ND	No	Human and animal fecal waste
Giardia (cyst/liter)	0	TT	ND	1.3	No	Human and animal fecal waste
Giardia found in water sampled from Susquehanna River (Havre de Grace Water Treatment Plant).						

Important Drinking Water Definitions	
AL	Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Avg	Average: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Level 1 Assessment	A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
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 disinfection level goal: level of a disinfectant below which there is no known risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
NA	Not applicable
ND	Not detected
NTU	Nephelometric turbidity units: Turbidity is a measure of the cloudiness of the water. It is a good indicator of the effectiveness of our filtration system.
pCi/L	Picocurie per liter
ppb	Parts per billion: Or micrograms per liter (µg/L)

ppm	Parts per million: Or milligrams per liter (mg/L)
ppt	Parts per trillion: Or nanograms per liter (ng/L)
TT	Treatment technique: A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total trihalomethanes

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