

Drinking Water Quality Report - Calendar Year 2018

U.S. Army Garrison Aberdeen Proving Ground South

Your water is safe to drink.

This report summarizes the 2018 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 (Consumer Confidence 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?

The water provided to APG South customers comes from multiple sources. Normally, the Van Bibber water treatment plant (WTP) in Edgewood, Maryland produces water for APG South (Water System MD 012-0010). Water is pumped from Winters Run (a surface water source), treated at the Van Bibber WTP and delivered to APG South customers. The WTP temporarily stopped producing water in August 2018 and since then APG South has obtained water from the Harford County Department of Public Works system. Harford County's water comes from a combination of sources, including Loch Raven Reservoir, Susquehanna River, and wells.

Source water assessment and its availability

Maryland Department of Environment (MDE) completed a source water assessment in 2005 for our source water. The study found that Winters Run, like many surface water sources in Maryland, is potentially most susceptible to

non-point pollution from agricultural activities and urban stormwater runoff. The source water assessment report is available from MDE's Water Supply Program webpage under Source Water Protection (www.mde.state.md.us/programs/Water/Water_Supply).

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (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: 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; 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 4) radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 or shutoff water lines in a nearby area, are conducting water main flushing, or there is increased usage from firefighting, this may cause a reddish/brown/yellow tinge to the water. If discolored water is evident, flush taps until the water is clear. Depending on the size of the building, this may be a lengthy flush (20 – 30 minutes).

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

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)
- Installation Website (www.apg.army.mil) with various links under 'Connect with us' to APG on Facebook
- Twitter
- DoD's Interactive Customer Evaluation (ICE), etc.)
- Installation Town Hall Briefings (held at APG Post Theater and regularly scheduled as announced on APG's website under 'Community')



Additional Information for Lead

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. APG South 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 2 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 or at <http://www.epa.gov/safewater/lead>.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which 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 or the State 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 the system is not considered vulnerable to certain types of contamination. As such, some of our data, though representative, may be more than one year old. All results are from 2018 unless otherwise noted. 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		
Disinfectants & Disinfection By-Products							
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)							
Chlorine (as Cl ₂) (ppm)	4	4	1.05	0	3.3	No	Water additive used to control microbes
Haloacetic Acids (HAA5s) (ppb)	NA	60	33 ¹	12 ²	47 ²	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb)	NA	80	47 ¹	23 ²	52 ²	No	By-product of drinking water disinfection
¹ The maximum Locational Running Annual Average (LRAA) of analytical results for samples at a particular monitoring location during the previous 4 calendar quarters. ² The minimum/maximum individual analytical results from 2018.							
Total Organic Carbon (compliance ratio)	NA	TT	NA	1	2.2	No	Naturally present in the environment
A 2018 running annual average ("detect in your water") was not calculated for TOC. Due to the WTP shutdown and subsequent water purchase from Harford County a year's worth of data was not available for this calculation.							

APG SOUTH WATER QUALITY DATA, continued

Contaminants	MCLG or MRDLG	MCL, TT or MRDL	Detect in Your Water	Range		Violation	Typical Sources
				Low	High		
Inorganic Contaminants							
Barium (ppb)	2000	2000	27	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm)	10	10	1.6	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Contaminants	MCLG	AL	Your Water	# Samples Exceeding AL	Violation	Typical Source
Copper - action level at consumer taps (ppb)	1300	1300	77	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	2.9	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Microbiological Contaminants							
Total Coliform (TCR) (positive samples/month)	0	1	0	NA	NA	No	Naturally present in the environment. Zero positive samples of 120 collected.
Turbidity (NTU)	NA	0.3	100%	0.01	0.29	No	Soil runoff
100% of the samples were below the TT level of 0.3 NTU. 95% of tested samples must be \leq 0.3 NTU. The highest single measurement was 0.29 NTU. Any measurement in excess of 1 is a violation unless otherwise approved by the state.							

In an effort to ensure the safest water possible the U.S. Installation Management Command has required us to monitor some unregulated contaminants. The Army has reviewed available data regarding potential exposures to Perfluorinated Compounds (PFCs) and believes it is appropriate to take action where PFCs may have impacted installation drinking water supplies. PFCs are manmade fluorinated chemicals that are not currently regulated by state or federal authorities in your drinking water. The most common military use of PFCs was in aqueous film-forming foam (AFFF) used for fire-fighting and in training to extinguish petroleum fires. The military now has a newer AFFF formulation, however, that does not contain PFCs.

Additional Contaminants	State MCL	EPA Health Advisory	Your Water		Violation	Explanation and Comment
			Low	High		
Perfluorobutanesulfonic acid (PFBS) (ppt)	NA	NA	2.60	3.53	No	Firefighting foams, industrial waste sites
Perfluorohexanesulfonic acid (PFHxS) (ppt)	NA	NA	2.44	3.98	No	Firefighting foams, industrial waste sites
Perfluorohexanoic acid (PFHxA) (ppt)	NA	NA	ND	2.14	No	Firefighting foams, industrial waste sites
Perfluorooctane sulfonate (PFOS) (ppt)	NA	70 ppt (PFOS/PFOA combined)	2.49	3.41	No	Firefighting foams, industrial waste sites
Perfluorooctanoic acid (PFOA) (ppt)	NA		2.03	2.93	No	Firefighting foams, industrial waste sites

HARFORD COUNTY WATER QUALITY DATA

In accordance with the CCR, 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 2018. Harford County's annual Water Quality Reports are posted at www.harfordcountymd.gov.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Disinfectants & Disinfection By-Products							
Chlorine (as Cl ₂) (ppm)	4	4	2.5	0.4	2.5	No	Water additive used to control microbes. Avg = 1.46
Haloacetic Acids (HAA5s) (ppb)	NA	60	29 ¹	9 ²	43 ²	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb)	NA	80	44 ¹	9 ²	72 ²	No	By-product of drinking water disinfection
¹ The maximum Locational Running Annual Average (LRAA) of analytical results for samples at a particular monitoring location during the previous four calendar quarters. ² The minimum/maximum individual analytical results from 2018.							
Total Organic Carbon	NA	TT	Compliance level % removal ranges from 0.8 – 3.0			No	Naturally present in the environment

HARFORD COUNTY WATER QUALITY DATA, continued

Unregulated Contaminants	State MCL	Avg	Your Water		Violation	Explanation and Comment
			Low	High		
Anatoxin-a (ppb)	NA	0.005	<0.03	0.073	No	Cyanobacteria bloom in fresh water.
Haloacetic Acids (HAA6Br) (ppb)	NA	6.6	3.4	9.9	No	Erosion of natural deposits.
Haloacetic Acids (HAA9) (ppb)	NA	32.7	12.4	63.4	No	Byproduct of drinking water disinfection.
Manganese (ppm)	NA	0.015	0.001	0.024	No	Byproduct of drinking water disinfection.
Perfluorooctanoic acid (ppt)	NA	30.0	ND	61.0	No	Firefighting foams, industrial waste sites
Sodium (ppm)	NA	33.9	13.0	79.3	No	Erosion of natural deposits; Sodium salts used in water treatment.

Contaminants	MCLG	AL	Your Water	# Samples Exceeding AL	Violation	Typical Source
Inorganic Contaminants						
Copper - action level at consumer taps (ppb)	1300	1300	170	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	<2.0	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Violation	Typical Source
				Low	High		
Microbiological Contaminants							
Total Coliform (TCR) (positive samples/month)	0	5	0	NA	NA	No	Naturally present in the environment (zero positive of 1440 samples collected)
Turbidity (NTU)	NA	0.3	100%	0.015	0.268	No	Soil runoff. Avg = 0.054 NTU
100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.29. Any measurement in excess of 1 is a violation unless otherwise approved by the state.							

Important Drinking Water Definitions	
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.
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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MRDLG	Maximum residual disinfection 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.
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.
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
ppm	Parts per million, or milligrams per liter (mg/L)
ppb	Parts per billion, or micrograms per liter (µg/L)
ppt	Parts per trillion, or nanograms per liter (ng/L)

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