

Annual Drinking Water Quality Report

TOWN OF APPALACHIA WATER SYSTEM (PWSID #1195050)

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year **2017** is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, please contact: **Mark Quillin, Appalachia WTP (276)565-3903**
or
Fred Luntsford, Town Manager (276)565-3900

The times and location of regularly scheduled Town of Appalachia board meetings are as follows:

DATE: 3 RD Thursday of each month TIME: 6:00 pm LOCATION: Town Hall, 508 W Main St., Appalachia, VA

GENERAL INFORMATION

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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/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 (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. Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems. (5) 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 which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

SOURCE(S) and TREATMENT OF YOUR DRINKING WATER

The source(s) of your drinking water is surface water as described below:

The Source of the Town's water supply is Ben's Branch Reservoir containing 100 million gallons.

Your drinking water supply is treated as described below:

Treatment of the raw water consists of chemical addition, coagulation, flocculation, settling, filtration, and chlorination. All of these processes work together to remove the physical, chemical, and biological contaminants to make the water safe for drinking.
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The source water assessment of the Town's reservoirs by the Virginia Department of Health determined that the reservoirs were moderately susceptible to the contamination using the criteria developed by the State's approved Source Water assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern. The report is available by contacting your water system at the phone number or address given elsewhere in the drinking water quality report.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table below shows the results of our monitoring for the period of January 1st to December 31st, 2017. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Maximum Contaminant Level Goal, or MCLG - 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.

Maximum Contaminant Level, or MCL - 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.

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 contents.

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 contamination.

Non-detects (ND) - lab analysis indicates that the contaminant is not present

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

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

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

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.

WATER QUALITY RESULTS

Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Alpha Emitter(pCi/L)	0	15	< 0.5	No	N/A	07/09/2014	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	< 0.7	No	N/A	07/09/2014	Erosion of natural deposits
Turbidity (NTU)	0	TT, 1 NTU max	0.14	No	N/A	09/09/2017	Soil Runoff
		TT, ≤ 0.3 NTU 95% of the time	100%			08/14/2017	
Fluoride (ppm)	4	4	1.03	No	N/A	01/10/2017	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.014	No	N/A	07/05/2017	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.04	No	0.41 – 1.30	2017	Water additive used to control microbes.
Haloacetic Acids (ppb)	N/A	60	25	No	N/A	03/29/2017	By-Product of drinking water disinfection.
Total Trihalomethane (ppb)	N/A	80	46	No	N/A	09/18/2017	By-Product of drinking water disinfection.
Total Organic Carbon Removal Ratio	N/A	TT In compliance if ≥ 1.0	1.00	No	N/A	2017	Naturally present in the environment.

Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	90 th Percentile	Date of Sampling	# of Sampling Sites Exceeding Action Level	Typical Source of Contamination
Copper (ppm)	0	1.3	0.066	08/09/2016	0	Corrosion of household plumbing; erosion
Lead (ppb)	0	15	3	08/09/2016	0	Corrosion of household plumbing; erosion

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. The Town of Appalachia 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

VIOLATION INFORMATION

No MCL or TT violations occurred during the year of 2017.

The water quality results in Table 1 are from testing done in 2017. However, the state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

MCL's are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

OTHER VIOLATION INFORMATION

No violations occurred in 2017.

* Many other contaminants including coliform bacteria were analyzed, but were not detected during the calendar year 2017.

ADDITIONAL HEALTH INFORMATION

As you can see by the table, our system had no water quality violations. We're proud that your drinking water exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents, as expected, have been detected. This is normal and the EPA has determined that your water is safe at these levels.

ADDITIONAL INFORMATION ABOUT YOUR WATERWORKS

The Town of Appalachia takes great pride in it's water system. Town water treatment and distribution employees strive at all times to provide citizens with clean, safe and top quality water at every tap. We ask that all of our customers work with us to help protect our water sources, streams and rivers, which are the heart of our communities, our way of life and the key to future development.

The Town of Appalachia will no longer be mailing out copies of the Consumer Confidence Report, but will provide a copy upon request at the Town Hall.