

**Annual Drinking Water Quality Report
WISE COUNTY PUBLIC SERVICE AUTHORITY (PWSID NO. 1195900)**

INTRODUCTION

This Annual Drinking Water Quality Report for Calendar year **2016** 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, want additional information about any aspect of your drinking water, or want to know how to participate in decisions that may affect the quality of your drinking water, please contact: **Wise County Regional Water Treatment Plant at (276) 762-0159. You may also contact Bobby Reynolds, Jr. at 276 – 762 – 0159.**

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

Date: 2nd Tuesday of each month **Time:** 6:00 PM **Location:** Wise County PSA Office
For additional information call (276) 679 -1520

GENERAL INFORMATION

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).

The sources of drinking water (both tap 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 storm water 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 storm water 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 storm water 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 limits 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.

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).

SOURCE and TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is surface water as described below.

The Wise County Regional Water Treatment Plant obtains water from the Clinch River, which is a surface water source. The intake structure is located in Carfax near the CSX Railway Line. The Water Treatment Plant is located at 3055 Carfax Road, Coeburn. The plant is capable of treating 2.0 million gallons per day, with current treatment averaging 850,000 gallons per day. A source water assessment of our system was conducted in 2001 by the Virginia Department of Health. The river was determined to be of high susceptibility to contamination using the criteria developed by the state in its 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 representative at the phone number or address given elsewhere in this drinking water quality report.

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.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on this page shows the results of our monitoring for the period of January 1st to December 31st, **2016**. 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:

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 waterworks to identify potential problems and determine (if possible) why an *E. coli* PMCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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.

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.

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: - 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.

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.

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

Maximum Residual Disinfectant Level (MRDL) – 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.

WATER QUALITY RESULTS Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Trihalomethanes (ppb)	N/A	80	72	N	17 - 120	2016	By-product of drinking water disinfection
Haloacetic Acids (ppb)	NA	60	50	N	10 - 99	2016	By-product of drinking water disinfection
Nitrate (ppm)	10	10	1.09	N	N/A	2016	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (ppm)	2	2	0.038	N	N/A	2016	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	4.0	4.0	1.07	N	0.2 – 2.0	2016	Water additives to control microbes
Turbidity (NTU)	N/A	TT, 1 NTU max	0.1	N	N/A	2016	Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
		TT < 0.3 NTU 95% of time	100 %	N	N/A		
Total Organic Carbon	NA	TT, MET when > or = 1	1.0	N	1.0 – 1.74	2016	Naturally present in the environment
Combined radium (pCi/L)	0	5	1.4	N	N/A	2016	Erosion of natural deposits
Fluoride (ppm)	4	4	0.86	N	N/A	2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	90 th Percentile	Date of Sample	# of Sample Sites Exceeding Action Level	Typical source of Contamination
Lead (ppb)	0	AL= 15	2	2014	0	Corrosion of household plumbing system; Erosion of natural deposits
Copper (ppm)	1.3	AL = 1.3	0.150	2014	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

VIOLATION INFORMATION

No violations in 2016.

The water quality results in the above **tables** are from testing done in **2016**. 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.**

ADDITIONAL HEALTH INFORMATION

In 2016, the Wise County PSA Regional WTP began monitoring for Cryptosporidium in the source water (before treatment) as required by EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Cryptosporidium is a microscopic parasite found in surface water throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Under the LT2ESWTR, the average Cryptosporidium concentration determines if additional treatment measures are needed. Twenty-four samples are required for analysis over a two-year period. During 2016, the average Cryptosporidium concentration was 0 oocysts per liter for the 4 samples collected. Based on the Cryptosporidium monitoring results so far and the current performance of the treatment plant, we anticipate meeting the future treatment requirements of the LT2ESWTR.

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. Wise County Public Service Authority 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 or until it becomes cold or reaches a steady temperature 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>.

VIOLATION INFORMATION

The Wise County Regional Water Treatment Plant received no violations for the year of 2016 .

ADDITIONAL INFORMATION ABOUT YOUR WATERWORKS

As you can see by this report, your drinking water exceeds all State and Federal requirements. The employees at the Wise County Regional Water Treatment Plant are committed to delivering safe and reliable drinking water to all of our customers. Any comments or questions concerning this report will be readily accepted.

IF YOU DESIRE A PAPER COPY YOU CAN RECEIVE ONE AT THE WISE COUNTY PUBLIC SERVICE AUTHORITIES OFFICE.