

CAMPBELL COUNTY UTILITIES AND SERVICE AUTHORITY



2015 WATER QUALITY REPORT

<http://www.ccusa-water.com>

PWSID No. 5031150 – Central System

PWSID No. 5031170 – East System

The Campbell County Utilities and Service Authority (CCUSA) presents the 2015 Water Quality Report. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH). These regulations require CCUSA, along with other water utilities, to provide our customers with valuable information about your drinking water for calendar year 2015. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

If you have questions about this report or would like to participate in decisions affecting water quality, please contact Frank Davis, Administrator, at our office at (434) 239-8654, Monday through Friday during regular office hours (8:30 A.M. - 5:00 P.M.). The Authority Board meets the fourth Tuesday of each month, 6:30 P.M., at the Authority office (20644 Timberlake Road). Please visit our website, listed above, for more information about CCUSA.

WHAT'S IN MY WATER?

For your information, we have compiled tables referenced herein, showing the substances detected in our drinking water. These tables show the results of our monitoring for the period of January 1, 2015 to December 31, 2015 unless otherwise noted. As water travels over the land or underground, it can pick up substances such as microbes, inorganic or organic chemicals, and radioactive materials. Although all the levels of the substances or contaminants found in the water supply or our finished water, listed in the tables are less than the maximum contaminant level (MCL) set by United States Environmental Protection Agency (USEPA) and therefore not expected to cause any health risks, we feel it is important that you know exactly what was detected and the concentration of each substance present in the water. We emphasize that the water supplied to you from CCUSA is safe to drink.

GENERAL INFORMATION

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 USEPA Safe Drinking Water Hotline (800-426-4791).

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 can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. USEPA/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 (800-426-4791). *Cryptosporidium* is a naturally occurring microscopic organism found in surface waters throughout the United States. The treatment process utilized by the Otter River Water Treatment Plant (ORWTP) includes filtration which provides high-level protection against *Cryptosporidium*. However, since the finished water is not sterile, the absence of living *Cryptosporidium* cannot be guaranteed.

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 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, USEPA 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.

Under a program developed by VDH, detailed source water assessments have been completed for all of the Authority's water sources. Information concerning the assessments is included in this report. This report is available at the Authority's office or at the Virginia Department of Health, Danville Field Office.

OUR COMMITMENT TO QUALITY

Campbell County Utilities and Service Authority is committed to provide safe, high quality drinking water. In addition to providing safe drinking water, CCUSA's commitment to customers includes providing quality service, efficient operations, minimum rates and compliance with all regulatory requirements.

CCUSA employs 20 people and has an annual operating budget of approximately \$6 million to serve approximately 24,000 customers. The CCUSA is proud of its history of quality service. This level of water quality is achieved by continuous attention to treatment and distribution processes and by an ambitious water quality testing program that exceeds levels dictated by Federal and State regulations. Water quality professionals performed numerous laboratory tests on your drinking water to assure compliance with all water quality standards.

The cost to customers is another important measure when providing excellent customer service. CCUSA depends on revenue generated from system users and new connections to support Authority operations. Authority revenues, capital improvement funds from Campbell County, and developer contributions are utilized to support capital projects. CCUSA does not receive operating funds from Campbell County. To insure continued quality service, the Authority must have funds available for maintenance activities, quality monitoring as required by EPA and State authorities, infrastructure development and the continued rising costs of operation. Drinking water standards are continuously being developed by our lawmakers and are becoming more and more stringent with each law passed. Through foresight and planning, efficiency in operations, and focus on excellence in customer service, CCUSA is confident it can meet and exceed these regulations while continuing to provide customers with high quality drinking water at a reasonable price. The current water rate is \$4.65 per 100 cubic feet (or 748 gallons) and the sewer rate is \$4.90 per 100 cubic feet.

To insure water quality at your tap, you can perform a few simple maintenance items. During the summer, most people connect a garden hose to their outside faucet and leave it connected the entire time. If the faucet is left on, the heated water can back-siphon into your house plumbing. This could create a bad taste in your house water. As the hose heats up, it expands which can cause it to rupture. If left unattended, a large amount of water can be lost and this will dramatically increase your water bill cost. It is advised to always close outside faucets and/or disconnect the water hose from the faucet.

The water service, or meter, is located near the street and this is the point where the Authority's responsibility ends. Miss Utility is a call service that provides residents of Virginia a one-call number to report excavation projects. Please be aware that utilities typically will not mark privately-owned underground lines such as irrigation or sprinkler systems, private water and sewer. You are responsible for locating privately owned lines or hire a private locating service to locate them for you. The number to call Miss Utility is 1-800-552-7001 or 811. Every property owner is required to call Miss Utility before any excavation, including planting trees and installing posts.

CCUSA Meter System - Automated Meter Reading (AMR) technology has continued to advance and Campbell County Utilities and Service Authority (CCUSA) decided in 2006 to implement another phase in its technological vision by upgrading its AMR System. Tampering with a water meter is illegal and could result in fines and/or imprisonment. Not only is this illegal which ultimately costs all CCUSA customers, but it could also create a cross connection with non-approved sources. Visit our web site at www.ccusa-water.com to learn more about the Cross Connection Program. CCUSA is experiencing more damages caused by lawn mowing activities, especially with the meter transmitters which protrude through the meter box lid. If you contract your mowing activities please advise the contractor of the meter location. **DAMAGING THE METER AND/OR SERVICE BOX COULD COST YOU SEVERAL HUNDRED DOLLARS TO REPAIR OR REPLACE.** Always lift your mower deck or trim around the water meter box with a string trimmer.

Special lead notification: 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. CCUSA 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>.

SOURCE WATER ASSESSMENT REPORT(S) – (SWAR)

A SWAR consists of maps showing the source water assessment area, an inventory of known land use activities of concern and documentation of any known contamination within the last 5 years. This report was developed by the VDH and is the first step in assisting in the preparation of a Source Water Protection Program (SWPP).

OTTER RIVER WATER TREATMENT PLANT (Central Water System) – SWAR

A source water assessment of the Central Water System was conducted in 2003 by the Virginia Department of Health. The water sources were determined to be of highly susceptible to contamination using the criteria developed by the State in its approved Source Water Assessment Program. The report is available by contacting the Authority as noted elsewhere in this drinking water quality report.

CITY OF LYNCHBURG - SWAR (Campbell County Utilities and Service Authority East System)

A source water assessment of the City of Lynchburg's system was conducted in 2002 by the Virginia Department of Health. The water sources were determined to be highly susceptible to contamination using the criteria developed by the State in its approved Source Water Assessment Program. The report is available by contacting the City of Lynchburg at 525 Taylor Street, Lynchburg, VA 24504, phone: (434) 847-1322.

DISINFECTION BYPRODUCTS

What are disinfection byproducts and what do they have to do with my water? The surface water supply is exposed to plants and their byproducts; however, groundwater sources may or may not contain these contaminants. Plants contain organic carbon and the organic carbon is picked up by the water supply. When this carbon comes in contact with chlorine, used for disinfection, some chemical byproducts are created. The regulated byproducts are trihalomethane(s) (TTHM) and haloacetic acids (HAA5). Some people who drink water containing trihalomethanes and haloacetic acids in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer, although there is no documented evidence that this has occurred. The regulated annual average limit for TTHM and HAA5 is 80 µg/l and 60 µg/l respectively.

DEFINITIONS

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.

MCLG - *Maximum Contaminant Level Goal*; The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MRDL - *Maximum Residual Disinfectant Level*; The highest level of a disinfectant allowed in drinking water.

MRDLG - *Maximum Residual Disinfectant Level Goal*; The level of a drinking water disinfection below which there is no known or expected risk to health.

n/a – *Not Applicable*.

ND - *Non-detects*; Laboratory analysis indicated that the Contaminant is not present.

NTU – *Nephelometric Turbidity Units*.

pCi/L - *Picocuries per liter*, is the measurement of a natural rate of decay of a radioactive containment.

ppb (ug/l) - *Part per billion*; (or micrograms per liter) (ug/l) is equivalent to one penny in \$10,000,000.

ppm - *Parts per million*; One part per million (or milligrams per liter) is equivalent to one penny in \$10,000.

SMCL – *Secondary Maximum Contaminant Level*; Limits on non-health contaminants.

TT - *Treatment Technique*; is a required process intended to reduce the level of a contaminant in drinking water.

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.

< - Less Than.

OTTER RIVER WATER TREATMENT PLANT - 2015

Contaminant/ Unit of Measurement	MCLG	AL	90 th Percentile Value	Violation	Typical Source of Contamination
			number of sites exceeding AL		
¹ Copper, ppm	1.3	1.3	0.020 0 out of 30	NO	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
¹ Lead, ppb	0	15	11.0 2 out of 30	NO	Corrosion of household plumbing systems and erosion of natural deposits.
Contaminant/ Unit of Measurement	MCLG	MCL	Highest Level and Range	Violation	Typical Source of Contamination
Fluoride, ppm	4	4	.89 (average) 0.64 -1.14(range)	NO	Erosion of natural deposits; Water additives which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate + Nitrite (as Nitrogen), ppm	10	10	0.39	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity, NTU	n/a	1.0 Max TT 0.3 in 95% of monthly samples	0.04 (highest level) 100% < 0.3	NO	Soil runoff
Chlorine, ppm	MRDLG = 4	MRDL = 4	1.20 (highest sampled) 0.29– 1.20 (range)	NO	Water additive to control microbes.
Total Organic Carbon, (TOC)	n/a	TT Ratio ≥ 1.0	1.10 (Avg. removal ratio) 1.10 -1.41(range)	NO	Naturally present in the environment
Trihalomethanes (TTHM), ppb	n/a	80	65.3 (highest running average) 25.6 – 107.6 (range)	NO	By-products of drinking water disinfection.
Haloacetic Acids (HAA), ppb	n/a	60	46 (highest running average) 28 – 60 (range)	NO	By-products of drinking water disinfection.
² Gross Alpha, pCi/L	0	15	< 0.5	NO	Erosion of natural deposits
² Radium-228, pCi/L	0	5	< 0.6	NO	Erosion of natural deposits
Barium	2	2	0.013 mg/L	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.

¹ Data from 2015. Next required sampling period in 2018. ² Data from 8/4/14. Next required sample period 2020.

**2015 Contaminants for Spring
2016 CCR - City of Lynchburg
Purchased Water**

Constituents/ Unit of Measure	Violation	Level Detected		AL	MCLG	MCL	MDRL	Likely Source of Contamination
		Water from Abert Filtration Plant	Water from College Hill Filtration Plant					
Inorganic Contaminants								
Chlorine, ppm	NO	Range 0.21-1.82 Highest Average 1.18		—	—	—	4	Water additive to control microbes
Fluoride, ppm	NO	Average: 0.75 Range: 0.19-0.99	Average: 0.77 Range: 0.48-1.11	—	4	4	—	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead, ppb	NO	90 th percentile value=1 0 above action limit		15	0	—	—	Corrosion of household plumbing system erosion of natural deposits
Copper, ppm	NO	90 th percentile value=0.06 0 above action limit		1.3	1.3	—	—	Corrosion of household plumbing system erosion of natural deposits
Barium, ppm	NO	Abert 0.012	CH 0.011	—	2	2	—	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Microbiological Contaminants								
Total coliform bacteria, Presence or absence	NO	2.5% of monthly samples positive (highest monthly average)		—	0	5% of monthly samples positive	—	Naturally present in the environment
Turbidity, NTU	NO	0.17 (highest level) 100% <0.3	0.11 (highest level) 100% <0.3	—	n/a	TT	—	Soil runoff
No single sample can be greater than 1 NTU. At least 95% of the samples taken every month must be less than 0.3 NTU								
Volatile Organic Contaminants								
Trihalomethanes (TTHM), ppb	NO	13-66 (range) 53(highest average)		—	0	80	—	By-product of drinking water disinfection
Haloacetic Acids (HAA), ppb	NO	11-42 (range) 37 (highest average)		—	0	60	—	By-product of drinking water disinfection
Radioactive Contaminants								
Radium-228, pCi/L	NO	0.6	ND	—	0	5	—	Erosion of natural deposits
Disinfection By-Product Precursors								
Total Organic Carbon (ppm) (TOC) Raw water, ppm	NO	Highest Avg.= 1.49 Range= 1.06-1.91	Highest Avg.=1.54 Range= 1.11-2.21	—	N/A	TT	—	Naturally present in the environment
Total Organic Carbon (ppm) (TOC) Treated, water ppm	NO	Highest Avg.= 0.81 Range= 0.63-1.07	Highest Avg.=0.78 Range= 0.57-0.99	—	N/A	TT	—	Naturally present in the environment

Secondary Contaminants

Secondary Maximum Contaminant Levels (SMCL) are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present risk to human health at the SMCL.

Contaminant	SMCL	Abert	CH	Likely Sources
Sodium, ppm	NA	5.7	5.8	Naturally present in the environment; addition of water treatment substances
Sulfate, ppm	250	10.3	8.4	Naturally present in the environment; addition of water treatment substances

Cryptosporidium

In 2015, the City of Lynchburg analyzed six samples of source water for cryptosporidium. These water samples were collected before any treatment had been applied at our water filtration plant. One of these samples contained a very small amount of cryptosporidium (0.1 oocyst/Liter). Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. The City of Lynchburg utilizes filtration to treat drinking water which removes cryptosporidium, but filtration methods cannot guarantee 100 percent removal. The City of Lynchburg, Department of Water resources works diligently to optimize the filtration process in order to ensure the greatest cryptosporidium removal.

Campbell County East System – 2015

Contaminant/ Unit of Measurement	MCLG	AL	90 th Percentile Value (Range)	Violation	Typical Source of Contamination
			number of sites exceeding AL		
¹ Copper, ppm	1.3	1.3	ND – 0.10 0 out of 5	NO	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
¹ Lead, ppb	0	15	ND 0 out of 5	NO	Corrosion of household plumbing systems, erosion of natural deposits.
Contaminant/ Unit of Measurement	MCLG	MCL	Highest Level and Range	Violation	Typical Source of Contamination
Chlorine, ppm	MRDLG = 4	MRDL = 4	0.83 (highest) 0.48 – 0.83 (range)	NO	Water additive to control microbes.
Trihalomethanes (TTHM), ppb	0	80	24 – 51 (range) 39 (highest average)	NO	Some people who drink water containing trihalomethanes in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems and may have increased risk of getting cancer. By-product of drinking water disinfection.
Haloacetic Acids (HAA), ppb	0	60	15 21– 48 (range) 29 (highest average)	NO	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. By-product of drinking water disinfection.

¹ Next sampling period 2017. Sample Results 2014.

WHERE DOES MY WATER COME FROM?

CCUSA supplies water every day to more than 24,000 citizens in Campbell County. Over 864 million gallons of water was delivered from these water supplies in 2015.

Central Water System - CCUSA owns and operates the Otter River Water Treatment Plant, which has a capacity of 4.0 MGD. The water supply for this facility is the Big Otter River. This service area contains approximately 95% of CCUSA's customer base. The service area includes the Timberlake area east to Route 29, the Route 29 corridor, Route 24 west of Route 29 to Evington and Route 24 east to Concord and 460.

City of Lynchburg System - CCUSA has an agreement with the City of Lynchburg to purchase water for County residents located in areas where CCUSA water lines cannot provide service otherwise. These areas include the Vista Acres Subdivision, Mount Sterling Drive and Greenview Drive,

Campbell County East System – The Campbell County East System is directly supplied by the City of Lynchburg water system. Along with the contaminants identified in the City's table above, the Authority detected the additional contaminants noted in the above table for the East System. The area includes Old Rustburg Road area and Route 460 east from the City of Lynchburg and Mount Athos Road.

CONSECUTIVE SYSTEMS

Campbell County Utilities and Service Authority also serves water to the Town of Appomattox and the Town of Altavista. This water delivered to these customers is produced by the Otter River Filter Plant, located at 9625 Leesville Road, Evington, Virginia.