



# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2016

*Presented By*  
**Maury County  
Water System**

## We've Come a Long Way

Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

### Mission Statement:

Our mission is to provide safe, reliable drinking water to the residents of Maury County at the lowest possible cost and still meet all federal and state requirements. Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

## Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or at <http://water.epa.gov/drink/hotline>.



## Lead in Home Plumbing

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. We are 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 [www.epa.gov/lead](http://www.epa.gov/lead).

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that is packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you would pay for bottled water.

For a detailed discussion on the NRDC study results, check out their website at <https://goo.gl/Jxb6xG>.

## Where Does My Water Come From?

Maury County Water System purchases its water from Columbia Power and Water System. Columbia Power and Water System has one water treatment plant, which draws its water from the Duck River. The Duck River is 169 miles long, making it the longest river located entirely in the State of Tennessee. Duck River is the sole water source for 250,000 people in Tennessee.

The watershed for Maury County Water System's water supply is part of the Upper Duck River Watershed, which is located in Middle Tennessee and covers parts of Bedford, Coffee, Franklin, Giles, Lincoln, Marshall, Maury, Moore, Rutherford, and Williamson counties. The Upper Duck River Watershed is part of the Tennessee River Basin.

## Community Participation

You are invited to participate in our public meetings and voice your concerns about your drinking water. Maury County Board of Public Utilities meets on the second Monday of each month, beginning at 5:30 p.m. at 765 New Lewisburg Highway. Please feel free to participate in these meetings.

## What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (back-pressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (back-siphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

## How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

## Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Tennessee Department of Environment and Conservation has a website (<https://goo.gl/d9Vlku>) that provides complete and current information on water issues in Tennessee, including valuable information about our watershed.

## Substances That Could Be in Water

In order to ensure that tap water is safe to drink, U.S. EPA and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm-water runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Larry Chunn at (931) 381-8900, or email at [lchunn@mymcws.com](mailto:lchunn@mymcws.com). You can also visit our website at [www.mymcws.com](http://www.mymcws.com).

## Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Columbia Power and Water System met the Treatment Technique requirement for Total Organic Carbon in 2016.

Regulated Substances										
				Columbia Power and Water System		Maury County Water System				
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	MCLG [MRDLG]	Amount Detected	Range Low-High	Amount Detected	Range Low-High	Violation	Typical Source	
Alpha Emitters (pCi/L)	2012	15	0	5.5	NA	NA	NA	No	Erosion of natural deposits	
Atrazine (ppb)	2015	3	3	1.46	NA	NA	NA	No	Runoff from herbicide used on row crops	
Barium (ppm)	2014	2	2	0.023	NA	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Chlorine (ppm)	2016	[4]	[4]	2.18 (Average)	1.43–3.29	1.10	0.2–2.5	No	Water additive used to control microbes	
Chlorite (ppm)	2016	1	0.8	0.182 (Average)	0.017–0.710	NA	NA	No	By-product of drinking water disinfection	
Fluoride (ppm)	2014	4	4	<0.100	NA	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	
Halogenated Acids [HAA] (ppb)	2016	60	NA	24.1 (Average)	4.68–88.6	41	4.9–53.1	No	By-product of drinking water disinfection	
Nitrate (ppm)	2016	10	10	0.319	NA	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
Selenium (ppb)	2014	50	50	1.8	NA	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	31.6 (Average)	4.10–108	49	9.44–69.6	No	By-product of drinking water disinfection	
Total Coliform Bacteria (# positive samples)	2016	TT	0	0	NA	0	NA	No	Naturally present in the environment	
Total Organic Carbon (% removal)	2016	TT > 25%	NA	45%	NA	NA	NA	No	Naturally present in the environment	
Turbidity <sup>2</sup> (NTU)	2016	TT	NA	0.580	0.030–0.580	NA	NA	No	Soil runoff	
Turbidity (lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	99	NA	NA	NA	No	Soil runoff	

## Tap Water Samples Collected for Lead and Copper Analyses from Sample Sites throughout the Community

			Columbia Power and Water System		Maury County Water System				
Substance (Unit of Measure)	Year Sampled	AL	MCLG	Amount Detected (90th%tile)	Sites Above AL/Total Sites	Amount Detected (90th%tile)	Sites Above AL/Total Sites	Violation	Typical Source
Copper (ppm)	2016	1.3	1.3	0.106	0/30	0.065 <sup>3</sup>	0/30 <sup>3</sup>	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2016	15	0	<2.02	0/30	<0.5 <sup>3</sup>	0/30 <sup>3</sup>	No	Corrosion of household plumbing systems; Erosion of natural deposits

### UNREGULATED SUBSTANCES - COLUMBIA POWER AND WATER SYSTEM

Substance (Unit of Measure)	Year Sampled	Amount Detected	Range Low-High	Typical Source
Bromodichloromethane (ppm)	2016	0.000680	NA	By-product of drinking water chlorination
Chloroform (ppm)	2016	0.00257	NA	By-product of drinking water chlorination
Sodium (ppm)	2016	10.9	NA	Erosion of natural deposits; Used in water treatment

<sup>1</sup> Sampled in 2016.

<sup>2</sup> Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

<sup>3</sup> Sampled in 2015.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

**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 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 contaminants.

**NA:** Not applicable.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

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