



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

ANNUAL  
**WATER  
QUALITY  
REPORT**

WATER TESTING PERFORMED IN 2017



## Quality First

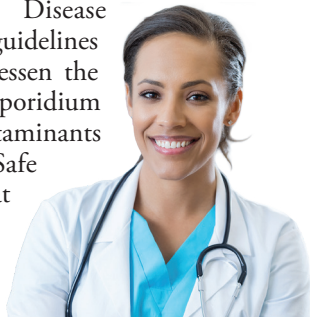
Once again we are proud to present our annual water quality report covering the period between January 1 and December 31 2017. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than any other point in human history. Our exceptional staff continues to work 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 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 <http://water.epa.gov/drink/hotline>.



## 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>.

## 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).

## 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.



## Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments such as iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

## 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.

Water treatment is a complex, time-consuming process.

## Substances That Could Be in Water

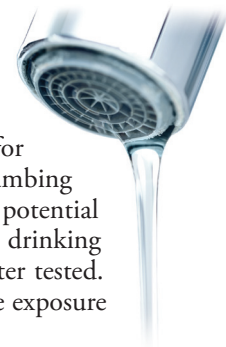
In order to ensure that tap water is safe to drink, U.S. EPA and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for 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.

## 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).



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables show 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 contaminants 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 the sample was taken.

Columbia Power and Water System met the Treatment Technique requirement for Total Organic Carbon in 2017.

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
<b>Alpha Emitters</b> (pCi/L)	2012	15	0	5.5	NA	NA	NA	No	Erosion of natural deposits
<b>Atrazine</b> (ppb)	2017	3	3	<0.0001	NA	NA	NA	No	Runoff from herbicide used on row crops
<b>Barium</b> (ppm)	2017	2	2	0.0216	NA	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
<b>Chlorine</b> (ppm)	2017	[4]	[4]	2.69 (average)	1.44–3.80	1.60	0.2–2.3	No	Water additive used to control microbes
<b>Chlorite</b> (ppm)	2017	1	0.8	0.363 (average)	0.036–0.536	NA	NA	No	By-product of drinking water disinfection
<b>Fluoride</b> (ppm)	2017	4	4	<0.100	<0.1–<0.1	NA	NA	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAA]</b> (ppb)	2017	60	NA	50	1–60	52	9–78	No	By-product of drinking water disinfection
<b>Nitrate</b> (ppm)	2017	10	10	0.496	NA	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Selenium</b> (ppb)	2017	50	50	1.80	NA	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
<b>Total Organic Carbon</b> (ppm)	2017	TT	NA	57.5% Average Removal	25% Highest Removal Required	NA	NA	No	Naturally present in the environment
<b>TTHMs [Total Trihalomethanes]<sup>1</sup></b> (ppb)	2017	80	NA	70	1–80	63	16–85	No	By-product of drinking water disinfection
<b>Total Coliform Bacteria</b> (positive samples)	2017	TT	NA	0	NA	0 <sup>2</sup>	NA <sup>2</sup>	No	Naturally present in the environment
<b>Turbidity<sup>3</sup></b> (NTU)	2017	TT	NA	0.730	0.040–0.730	NA	NA	No	Soil runoff
<b>Turbidity</b> (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	99	NA	NA	NA	No	Soil runoff

## Tap Water Samples Collected for Copper and Lead 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>4</sup>	0/30 <sup>4</sup>	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2016	15	0	<2.02	0/30	<0.5 <sup>4</sup>	0/30 <sup>4</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)	2017	0.00185	NA	By-product of drinking water chlorination
Chloroform (ppm)	2017	0.00494	NA	By-product of drinking water chlorination
Sodium (ppm)	2017	17.0	NA	Erosion of natural deposits; Used in water treatment

<sup>1</sup> Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<sup>2</sup> Sampled in 2016.

<sup>3</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>4</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.