

Water and Wastewater Authority of Wilson County Consolidated UD Supply Water Quality Report 2016

Is my drinking water safe?

Yes, our water meets all of EPA's health standards. We have conducted numerous tests for over 80 contaminants that may be in drinking water. As you will see in the chart on the back, we detected only 16 of these contaminants. We found all of these contaminants at safe levels.

What is the source of my water?

Your water, which is surface water, comes from the east fork of Stones River J. Percy Priest Lake and is delivered to the Water and Wastewater Authority of Wilson County by Consolidated Utility District. Our goal is to protect our water from contaminants and we are working with the State to determine the vulnerability of our water source to **potential** contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving this water system. The SWAP Report assesses the susceptibility of untreated water sources to **potential** contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources have been rated as reasonably susceptible, moderately susceptible or slightly susceptible based on geologic factors and human activities in the vicinity of the water source. Our source is rated as reasonably susceptible to potential contamination.

An explanation of Tennessee's Source Water Assessment Program, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed online at <http://www.tn.gov/environment/article/wr-wq-source-water-assessment> or you may contact the Water Authority to obtain copies of specific assessments.

Why are there contaminants in my water?

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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Este informe contiene información muy importante. Tradúscalo o hable con alguien que lo entienda bien.

For more information about your drinking water, please call Chris Leauber at 615-449-2951.

How can I get involved?

Our Water Board meets Quarterly except for special called meetings at the Water Authority office. Please feel free to participate in these meetings.

Is our water system meeting other rules that govern our operations?

The State and EPA require us to test and report on our water on a regular basis to ensure its safety. We have met all of these requirements. Results of unregulated contaminant analysis are available upon request. We want you to know that we pay attention to all the rules.

Other Information

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:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- 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.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- 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 and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Do I Need To Take Special Precautions?

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 under-gone 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 not only their drinking water, but food preparation, personal hygiene, and precautions in handling infants and pets 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).

Lead in Drinking Water

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 Water 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 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>.

Water System Security

Following the events of September 2001, we realize that our customers are concerned about the security of their drinking water. We urge the public to report any suspicious activities at any utility facilities, including treatment plants, pumping stations, tanks, fire hydrants, etc. to 615-449-2951.

Water Quality Data

What does this chart mean?

- **MCLG:** Maximum Contaminant Level Goal, or 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.
- **MCL:** Maximum Contaminant Levels are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- **AL - Action Level,** or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** – explained as a relation to time and money as 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** - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Parts per trillion (ng/L) or Nanograms per liter (ng/l),** explained in terms of money as one penny in \$10,000,000,000.
- **Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **TT - Treatment Technique,** or a required process intended to reduce the level of a contaminant in drinking water.
- **BDL- Below Detection Limit**
- **ND- Non-Detects-**laboratory analysis indicates that the contaminant is not present.
- **Mrem/yr- Millirems per year-** measure of radiation absorbed by the body.
- **MRDL-Maximum Residential Disinfectant Level-**The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial disinfectants.
- **MRDLG – Maximum residual disinfection level goal.** The level of a drinking water disinfectant below which there is no known or expected risk of health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **HAL – (Health Advisory Level)** EPA’s health advisory levels were calculated to offer a margin of protection against adverse health effects to the most sensitive populations.

Unless otherwise noted, data presented in this table is from sampling performed during the 2016 calendar year by Consolidated U.D. (CUD).

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria ¹	No	0	n/a	2016	0	5% positive samples	Naturally present in the environment
Copper ¹ 0 out of 30 sites exceeded action level	No	90 th % = 0.186 ppm	n/a	2015	1.3 ppm	AL=1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	.15 ppm avg.	BDL - .313 ppm	Monthly	4.0 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrates	No	BDL	n/a	10/5/16	n/a	10 ppm	Leaching from septic tanks; sewage; erosion of natural deposits
Lead ¹ 0 out of 30 sites exceeded action level	No	90 th % = 1.04 ppb	n/a	2015	0 ppb	AL=15 ppb	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	No	13.9 mg/l	13.9 mg/l	7/6/16	n/a	n/a	Erosion of natural deposits
TTHM* (Trihalomethane)	No	77.8 ppb Highest running annual avg.	6.74 – 147 ppb	Quarterly	n/a	80 ppb	By-product of drinking water chlorination
HAA (Haloacetic Acids)	No	49.4 ppb Highest running annual avg.	2.17 – 113 ppb	Quarterly	n/a	60 ppb	By-product of drinking water chlorination
Turbidity (Lowest monthly percent of samples meeting limit)	Yes** for Consolidated Utility District, our water provider	Lowest monthly percentage was 99.46% below .3 ntu (highest level detected was 2.0 ntu)	.02 – 2.0 ntu	Continuous	n/a	At least 95% of monthly samples must be below 0.3 ntu	Natural river sediment. Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. CUD met the treatment technique for turbidity with 99.95% of monthly samples below the limit of .3 ntu
Chlorine ¹	No	1.28 ppm avg.	0.3 – 2.4 ppm	2016	MRDLG 4 ppm	MRDL 4 ppm	Source water additive to control microbes
Total Organic Carbon (ppm)	No	n/a	n/a	n/a	n/a	TT	Naturally present in the environment. We met Treatment Technique for TOC in 2016.
Chlorine Dioxide	No	0.078 mg/l avg.	0 – .78 mg/l	Daily	MRDLG = .8 mg/l	.8 mg/l	Water additive used to control microbes
Chlorites	No	0.699 mg/l avg.	0.02 – .99 mg/l	Daily/Quarterly	.8 mg/l	1 mg/l	By-products of water disinfection

¹Sampling performed by the Water and Wastewater Authority of Wilson County.

* **TTHM's:** 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.

** On August 7, 2016, at approximately 2:55 p.m. a valve separating a sand filter from the clear well did not seal completely during a backwash. The result was that approximately 52 gallons of water exceeding the maximum turbidity limit of 1 NTU entered the clear well containing 2.75 million gallons. Although this volume is insignificant to public health and was verified by subsequent bacteriological samples, any volume above 1 NTU has to be reported to the customer. Hence, you received the following notice:

NOTICE OF VIOLATION - TURBIDITY TREATMENT TECHNIQUE VIOLATION - SINGLE EXCEEDANCE

Consolidated Utility District of Rutherford County recently violated a drinking water requirement. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation. We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. Normal turbidity levels at our plant are .03 to .41 turbidity units. A water sample taken August 7, 2016 showed levels of 2.0 turbidity units. This was above the standard of 1.0 units. Because of this high level of turbidity, there is a slight increased chance that the water might have contained disease-causing organisms. The issue occurred for less than ten minutes and was corrected.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Cryptosporidium:

Cryptosporidium is a microbial parasite which is found in surface water throughout the U.S. Monitoring of our source water indicated the presence of cryptosporidium in 3 out of 3 samples tested. While the most commonly used filtration methods cannot guarantee 100 percent removal, the treatment techniques employed at our water treatment facility minimizes the probability of Cryptosporidium oocyst in your drinking water. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. For more information on Cryptosporidium, contact the Safe Water Hotline (800-426-4791).

UNEGULATED Contaminants

Contaminant	Violation	Detection	Range	Test Date	MCLG	HAL	Source
Bromodichloromethane	No	.00355 mg/l	n/a	2/3/16	0 mg/l	n/a	Discharge from industry
Chlorodibromomethane	No	.000507 mg/l	n/a	2/3/16	0 mg/l	n/a	Discharge from industry
Chloroform	No	.0157 mg/l	n/a	2/3/16	0 mg/l	n/a	Discharge from industry
Perfluorobutanesulfonic acid (PFBS) ^a	No	2.9 ng/l avg.	BDL - 3.9 ng/l	Quarterly	n/a	70 ng/l	Discharge from industry
Perfluoroheptanoic acid (PFHpA) ^a	No	.73 ng/l avg/	BDL - 2.2 ng/l	Quarterly	n/a	70 ng/l	Discharge from industry
Perfluorooctanoic acid (PFOA)	No	5.5 ng/l avg.	2.7 - 9.4 ng/l	Quarterly	n/a	70 ng/l	Discharge from industry

Unregulated contaminants are those for which EPA has not established water standards. The purpose of unregulated contaminants monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. For additional information call the Safe Drinking Water Hotline at (800) 426-4791.

^a EPA has not established national primary drinking water regulations for PFOA and PFOS. EPA is evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act (SDWA). To regulate a contaminant under SDWA, EPA must first find that it: (1) may have adverse health effects; (2) occurs frequently (or there is substantial likelihood that it occurs frequently) at levels of public health concern; and (3) there is a meaningful opportunity for health risk reduction for people served by public water systems.

All other unregulated contaminants tested were either below Minimum Reporting Level (MRL) or Below Detection Limit (BDL).