Lincoln County Board of Public Utilities Water Quality Report for 2019

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'll see in the following charts, we only detected 10 of these contaminants. We found all of these contaminants at safe levels.

What is the source of my water?

Your water, which is ground water, comes from the Mississippian Carbonate Aquifer. 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 water to 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. The Lincoln County Board Of Public Utilities sources 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 www.state.tn.us/environment/dws/dwassess.shtml or you may contact the Water System to obtain copies of specific assessments.

A wellhead protection plan is available for your review by contacting Bryan Towry at the Lincoln County Board Of Public Utilities between 7:30 A.M. to 4:30 P.M. weekdays.

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 Bryan Towry at 438-8606.

How can I get involved?

Our Water Board meets on the first Thursday of the month at the utility office at 7:00 PM. Please feel free to participate in these meetings.

The Board Members serve four year terms. Vacancies on the Board are filled by appointment by the Lincoln County Mayor from a list of three nominees certified by the Board of Commissioners to the Lincoln County Mayor to fill a vacancy. Decisions by the Board of Commissioners on customer complaints brought before the Board of Commissioners under the District's customer complaint policy may be reviewed by the Utility Management Review Board of the Tennessee Department of Environment and Conservation pursuant to Section 7-82-702(7) of Tennessee Code Annotated.

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 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 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. Our Utility 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

W a t e r Q u a l i t y D a t a

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 Level, or 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. 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.
- MRDL: Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the 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.
- AL - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- Below Detection Level (BDL) - laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- 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.
- 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.

Contaminant	Violation Yes/No	Level Found	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Turbidity[1]	No	0.15	0.03-0.15	Daily	NTU	n/a	TT	Soil runoff
Barium	No	0.009	NA	12/19	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	No	90th %= 0.153	NA	3rd Quarter 2017	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead[4]	No	90th %=0.002	NA	3rd Quarter 2017	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)[5]	No	3.1	NA	8/19	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	4.66	NA	12/19	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
TTHM[6] [Total trihalomethanes]	No	4 Avg.	0-5	Quarterly	ppb	n/a	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	2 Avg.	0-5	Quarterly	ppb	N/A	60	By-product of drinking water disinfection.

Iron: *Iron occurs naturally in our raw water and occasionally accumulates in the distribution system. Iron shows up as "red" or "rusty" water at your tap. Although you do not want to drink water that is not clear, iron is not considered to be a hazard to your health. We test for iron weekly and it is usually around 0-0.02 ppm. The aesthetic limit for iron is 0.3 ppm.*

During the most recent round of Lead and Copper testing, only 0 out of 30 households sampled contained concentrations exceeding the action level.

[1]100% of our samples were below the turbidity limit.

[4]Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

[5]Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Health Effects

Microbiological Contaminants:

Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fecal coliform/E.Coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

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Volatile Organic Contaminants:

TTHMs [Total Trihalomethanes]. 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.

HAA [Haloacetic Acids]. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

The following chart is from information provided by Fayetteville Public Utilities and affects customers residing in Mulberry, Crystal Ridge, Belleville, Booneville and Chestnut Ridge.

Contaminant	Violation Yes/No	Level Found	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (RTCR)	No	1	0-1	10 samples/ month	NA	0	TT Trigger	Naturally present in the environment
E. coli Bacteria[1]	No	0	0	10 samples/ month	NA	0	See Footnote 1	Human or animal wastes
Turbidity[2]	No	0.27	0.02-0.27	Daily	NTU	n/a	TT	Soil runoff
Barium	No	0.0198	NA	2017	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine	No	1.56 avg.	0.34-2.27	Daily	ppm	4	MRDL=4	Water additive used to control microbes.
Chlorine Dioxide	No	300	0-300	Daily	ppb	800	MRDL=800	Water additive used to control microbes.
Chlorite	No	0.901	0.315-0.901	Daily	ppm	0.8	1.0	Water additive used to control microbes.
Copper	No	90th%= 0.0588	NA	2019	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead[4]	No	90th%= 0.500	NA	2019	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	No	0.326 avg.	0–0.657	Quarterly	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) [5]	No	1.01	NA	2019	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	1.96	NA	2019	ppm	NA	N/A	Erosion of natural deposits; used in water treatment
TTHM[6] [Total trihalomethanes]	No	48.2 avg.	24.8-81.9	Quarterly	ppb	NA	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	40.6 avg.	25.2-63.1	Quarterly	ppb	NA	60	By-product of drinking water disinfection.
Total Organic Carbon	No	1.355 avg.	1.19-1.49	Quarterly	ppm	NA	TT	Naturally present in the environment.

1 * E. coli: A system is in compliance with the MCL for E. coli for samples unless any of the conditions identified in parts one through four, listed below, occur.

1. The system has an E. coli-positive repeat sample following a total coliform positive routine sample.
2. The system has a total coliform positive repeat sample following an E. coli-positive routine sample.
3. The system fails to take all required repeat samples following an E. coli-positive routine sample.
4. The system fails to test for E. coli when any repeat sample tests positive for total coliform.

2 * We met the treatment technique requirement for turbidity with 100% of our monthly samples below the turbidity limit of 0.30 NTU. Turbidity is a measurement of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.

3* During the most recent round of Lead and Copper testing of 30 households, none of the homes we sampled contained concentrations exceeding the action level.

4* 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

5* We met the Treatment Technique requirement for Total Organic Carbon in 2019.

6* We began the Unregulated Contaminant Monitoring Rule (UCMR4) sampling as required by EPA in August, 2018. Unregulated contaminants are those that do not yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to assist the EPA in determining the occurrence of the unregulated contaminants in the drinking water and whether the contaminants should have a standard.