



WEST KNOX UTILITY DISTRICT WATER QUALITY REPORT

2023

West Knox Utility District did not provide the lead and copper participants with test results as outlined in Tenn. Comp. R. & Regs. ("Rule[s]") Chapter § 0400-45-01-.33(6)(e). The Division of Water Resources issued a Tier 3 reporting violation which requires West Knox Utility District to post a public notice. West Knox Utility District returned to compliance on December 18.

For more information, contact Christian Kidd, P.E. at (865)-690-2521 ext. 268 (ckidd@wkud.com).

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Drinking Water Sources

West Knox Utility District is pleased to present this year's Annual Water Quality Report. The information contained in the table covers the period from **January 1, 2023 through December 31, 2023**.

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 EPA's Safe Drinking Water Hotline at (800)-426-4791.

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 agricultural, 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 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.

Presently West Knox Utility District operates two surface water treatment plants both located on the Clinch River on Melton Hill Lake. We work with the State to determine the vulnerability of those water sources 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 (high), moderately susceptible (moderate) or slightly susceptible (low), based on geologic factors and human activities in the vicinity of the water source. The WKUD Water System sources are rated as reasonably susceptible to potential contamination.

Drinking Water Sources (Cont.)

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: <https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html> or you may contact the water system to obtain copies of specific assessments.

We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water **IS SAFE** at these levels.

Protecting Our Source Water

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of Tennessee's waterways by disposing in a permanent pharmaceutical take back bin. There are nearly 100 take back bins located across the state, to find a convenient location please visit: <http://tdeconline.tn.gov/rxtakeback/>

Information For Consumers At Risk

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 the advice about drinking water from their health care providers. EPA/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 at: (800)-426-4791.

Contact Information

We want all of our customers to be informed about their water and utility. If you want to learn more, please attend any of our regularly scheduled board meetings. They are normally held on the 4th Thursday of each month at 8:00 A.M. at the West Knox Utility District office located at 2328 Lovell Road, Knoxville, Tennessee.

You may also contact West Knox Utility District as listed below:

WEST KNOX UTILITY DISTRICT
P.O. Box 51370
KNOXVILLE, TN 37950-1370
Main Office: (865)-690-2521
Email: customerservice@wkud.com
Website: www.wkud.com

Terms & Definitions

West Knox Utility District is required by State & Federal laws to test your water for contaminants. In the Water Quality Summary you may find terms and abbreviations that you may not be familiar with. Below is a list a definitions to help you better understand these terms.

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

Below Detection Limit (BDL): Not detected at the Reporting Limit (or MCL where applicable).

Locational Running Annual Average (LRAA): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Maximum Containment Level Goal (MCLG): The level of contaminant in drinking water which below there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

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. Turbidity does not present any risk to your health. West Knox Utility District monitors turbidity because it is a good indicator that our filtration system is functioning properly.

Parts per million (ppm) or Milligrams per liter (mg/L):

one part per million is equivalent to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter: one part per billion is equivalent to one minute in 2,000 years or a single penny in \$10,000,000.

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

2023 UCMR5 SUMMARY					
PLANT DATA					
Unregulated Contaminant ¹	Violation Yes / No	Level Detected	Range Of Detections	Date Of Sample	Unit Of Measurement
Plant A Lithium Plant B Lithium	No	5.7 BDL	BDL - 5.7	Quarterly	ug/L
Plant A Per-fluorobutanesulfonic Acid (PFBS) Plant B Per-fluorobutanesulfonic Acid (PFBS)	No	0.0013 BDL	BDL - 0.0013	Quarterly	ug/L
Plant A Per-fluorobutanoic acid (PFBA) Plant B Per-fluorobutanoic acid (PFBA)	No	0.0021 0.0019	0.0019 - 0.0021	Quarterly	ug/L
Plant A Per-fluoropentanoic acid (PFPeA) Plant B Per-fluoropentanoic acid (PFPeA)	No	BDL 0.0015	BDL - 0.0015	Quarterly	ug/L

2023 WATER QUALITY SUMMARY

DISTRIBUTION DATA

Contaminant	Violation Yes / No	Level Detected	Range Of Detections	Date Of Sample	Unit Of Measurement	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Source Of Contamination
Lead ²	No	90th. Percentile BDL	BDL - 4.52	9/30/2023	ppb	0	AL = 15 ppb	Corrosion of household plumbing systems, erosion of natural deposits
Copper ²	No	90th. Percentile 0.0561	0.0041 - 0.206	9/30/2023	ppm	TT	AL = 1.3 ppm	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives
TTHM	No	59	26 - 85	Quarterly LRAA	ppb	80	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	43	18 - 58	Quarterly LRAA	ppb	60	60	By-product of drinking water disinfection
Total Organic Carbon ³	No	39% Achieved 25% Required	0.963 - 1.50	Quarterly	ppb	TT	TT - Trigger	Naturally present in the environment
Fluoride	No	0.507	0.435 - 0.549	Quarterly	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chlorine	No	1.7	0.7 - 2.2	80 / Month	ppm	4	4	Water additive used to control microbes

PLANT DATA

Contaminant	Violation Yes / No	Level Detected	Range Of Detections	Date Of Sample	Unit Of Measurement	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)	Likely Source Of Contamination
Plant A Turbidity ⁴ Plant B Turbidity ⁴	No	0.20 0.02	0.02 - 0.20 0.01 - 0.02	Continuous	NTU	N/A	TT - Trigger	Soil runoff
Plant A Nitrate Plant B Nitrate	No	0.294 0.315	0.294 - 0.315	7/10/2023	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Plant A Sodium Plant B Sodium	No	8.50 8.18	8.18 - 8.50	1/10/2023	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
Plant A Barium Plant B Barium	No	0.029 0.027	0.027 - 0.029	9/24/2020	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion
Plant A Fluoride Plant B Fluoride	No	0.696 0.677	0.677 - 0.696	9/24/2020	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Plant A Radium (226/228) Plant B Radium (226/228)	No	0.761 0.822	0.761 - 0.822	3/7/2023	pCi/L	5	5	Natural radioactivity in drinking water come from radioactive elements, and their decay products, that were incorporated in the earth at its formation, and others are produced continuously by cosmic ray bombardment

Table Notations

1. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant 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.

2. During the most recent round of lead and copper testing, 0 out of 30 households sampled contained concentrations exceeding the action level for lead and 0 out of 30 households for copper. 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. West Knox Utility District 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>." The level detected in the contaminant table above represents the 90th percentile values for Lead.

3. We met the Treatment Technique requirement for Total Organic Carbon in 2023.

4. West Knox Utility District met the Treatment Technique for turbidity with 100% of monthly samples below the turbidity limit of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of our filtration system.