West Knox Utility Annual Drinking Water Report for 2019

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, 2019 through December 31, 2019. This report shows that your drinking water, like all drinking water (Including bottled water) contains small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. The United States Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) have established limits on these contaminants. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Hotline at: 1-800-426-4791.

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:

1.) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
2.) 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.
3.) Pesticides and herbicides, which may come from a variety of sources such as agricultural, urban stormwater runoff, and residential uses.
4.) 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.
5.)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.

Presently West Knox Utility District operates two surface water treatment plants both located on the Clinch River on Melton Hill Lake. 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 (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. 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.

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: 1-800-426-4791.

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 meetings. They are held on the 4th Thursday of each month at 9:00 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
Main Office Fax: 865-692-0728
Water Plant: 865-690-4403
Email: customerservice@wkud.com

West Knox Utility District Water Quality Report 2019

Terms & Definitions

Below Detectable Limits (BDL) - Laboratory analysis indicates that the contaminant is not present in a detectable quantity.
Parts per million (ppm) or Milligrams per liter (mg/L) - 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 – one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.
Parts per trillion (ppt) or Nanograms per liter (nanograms/L) - one part per trillion corresponds to one minute in 2,000,000 years or one penny in $10,000,000,000,000.
Parts per quadrillion (ppq) or Picograms per liter (picograms/L) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
Million Fibers per Liter (MFL) - million fibers per liter is a measure of the asbestos fibers that are no longer than 10 micrometers.
Nephlometric Turbidity Unit (NTU) - nephlometric 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.
Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions. The State of Tennessee does not allow variances and exemptions.
Action Level (AL) – The concentration of a containment, which, when exceeded, triggers treatment or other requirements that a water system must follow.
Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
Maximum Contaminant Level (MCL) - The "maximum allowed" is 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.
Maximum Containment Level Goal (MCLG) - The goal is 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.
CCR Units – CCR Units express the MCL in whole numbers. For example ppb are used to eliminate fractions of ppm. (I.E. 0.050 ppm= 50 ppb)
MRDL - 'Maximum Residual 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 contaminants.
MRDLG - 'Maximum Residual Disinfectant Level Goal'- The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
RTCR - Revised Total Coliform Rule. This rule went into effect on April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.
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.

Water Quality Summary

Contaminant	Violation Yes / No	Level Detected	Range Of Detections	Date Of Sample	Unit Of Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria[4]	No	0	None Detected	70/Month		0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Lead[2]	No	Non-Detected	None Detected	Aug. 2017	ppb	0	AL=15 ppb	Corrosion of household plumbing systems, erosion of natural deposits
TTHM[1]	No	39	18 - 58	Quarterly LRAA	ppb	80	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)[3]	No	33	14 - 46	Quarterly LRAA	ppb	60	60	By-product of drinking water disinfection.
Total Organic Carbon	No	1.21	0.823 - 1.20	Quarterly	ppb	TT	TT - Trigger	Naturally present in the environment.
Copper[5]	No	0.0338	None Detected - 0.0338	Aug. 2017	ppm	TT	AL=1.3 ppm	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Plant A Turbidity	No	0.07	0.05 - 0.24	Continuous	NTU	N/A	TT - Trigger	Soil runoff
Plant B Turbidity	No	0.05	0.03 - 0.06	Continuous	NTU	N/A	TT - Trigger	Soil runoff
Plant A Nitrate	No	0.687	0.687	7/10/2019	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Plant B Nitrate	No	0.701	0.701	7/10/2019	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Plant A Sodium	No	9.92	9.92	1/8/2019	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
Plant B Sodium	No	10.2	10.2	1/8/2019	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
Fluoride	No	0.684	0.658 - 0.742	Quarterly	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chlorine	No	1.611	0.5 - 2.9	70/Month	ppm	4	4	Water additive used to control microbes.

1. *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.*

2. *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. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have increased risk of getting cancer.

4. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

5. 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. The level detected in the contaminant table above represents the 90th percentile values for Copper.

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 one of our permanent pharmaceutical take back bins. There are nearly 100 take back bins located across the state, to find a convenient location please visit: "http://tdeconline.tn.gov/rxtakeback/"

For more information please contact Jason Headrick at (865) 690-4403 or 2328 Lovell Rd, Knoxville, TN 37932.

This notice is being sent to you by West Knox Utility District. State Water System ID# 0000371.