

# *First Utility District of Knox County*

## *Water Quality Report 2009*

### **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 chart on the back, we only detected 15 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 Ft. Loudon Lake of the Tennessee River. 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) have 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. The **First Utility District of Knox County** source is rated as moderately 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 the Environmental Protection Agency (EPA) can be viewed online at [www.state.tn.us/environment/dws/dwassess.shtml](http://www.state.tn.us/environment/dws/dwassess.shtml) or you may contact the Water System 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. Community water systems are required to disclose the detection of contaminants; however, bottled water companies are not required to comply with this regulation. 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).

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 byproducts 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 that 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.

### **How can I get involved?**

Our Board of Commissioners usually meet in the last week of each month at the utility office located at 122 Durwood Rd. The date and time of the meeting will be included on your bill or contact our 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 about 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 three Commissioners of First Utility District serve four-year terms. Vacancies on the Board of Commissioners are filled by the Knox County Mayor from a list provided by the remaining Commissioners in office. Decisions by the Board of Commissioners on customer complaints brought before them 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.

Our web site [www.fudknox.org](http://www.fudknox.org) has additional information that will benefit you.

### **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 and 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 not only seek advice from their healthcare providers about their drinking water, but also food preparation, personal hygiene, and precautions in handling infants and pets. 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).

### **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, tanks, fire hydrants, pumping stations, etc. by calling us at (865) 966-9741 or call 911.

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

**For more information about your drinking water, please call Craig Mayes at 966-9021.**

# 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 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. Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.
- **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.
- **Million Fibers per Liter (MFL)** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **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.
- **pCi/l** - Radiological units in pico Curries per liter.
- **BDL** - Below Detectable Limits.

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform (% positive Samples) <sup>1</sup>	No	1	Nd-1%	10/2009	% pos	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Turbidity	No	0.29	0.03-0.29	2009	NTU	n/a	TT	Soil runoff
Asbestos	No	6.4	n/a	2002	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Copper <sup>2</sup>	No	0.042 90 <sup>th</sup> percent	BDL-0.042	2007	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	1.30	1.10-1.30	2009	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead <sup>2</sup>	No	2.0 90 <sup>th</sup> percent	BDL-2.0	2007	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	No	9.0	n/a	2009	ppm	n/a	n/a	Erosion of natural deposits; used in water treatment
Total Trihalomethanes TTHM <sup>3</sup>	No	56.0 RAA	35 - 113	2009	ppb	n/a	80 RAA	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	No	23.5 RAA	13.5-33.5	2009	ppb	n/a	60 RAA	By-product of drinking water disinfection.
Sulfate	No	11.0	n/a	2003	ppm	n/a	n/a	
Total Organic Carbon (TOC) <sup>4</sup>	No	1.4	1.3-1.4	2009	ppm	TT	TT	Naturally present in the environment
Gross Alpha	No	3.9	<1.3-3.9	9/2003	pCi/l	0	15pCi/l	Erosion of natural deposits
Radium 226	No	2.6	<0.2-2.6	9/2003	pCi/l	0	5pCi/l	Erosion of natural deposits
Chlorine	No	1.33	0.20-2.2	2009	ppm	4	4	Water additive used to control microbes.
Nitrate	No	0.73	0.73	2009	ppm	10	10	Runoff from fertilizer use.

1. Not a violation of the MCL for total coliform, the presence of total coliform were found in only 1% of samples in the month of October. Repeat sampling was negative for total coliform.

2. During the most recent round of Lead and copper testing, 0 out of 30 households sampled contained concentrations exceeding the action level. 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. First 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 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>.

3. Compliance is determined by a running annual average (RAA) of all sample results obtained quarterly at required sampling sites. Current monitoring meets requirements. 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.

4. The treatment technique for Total Organic Carbon was met for 2009. First Utility is required to monitor its source water for the presence of Cryptosporidium in order to meet requirements for its removal. Monitoring of the source water has revealed only 1 oocyst out of 24 samples. Cryptosporidium is a microbial parasite which is found in surface waters throughout the U.S. Although Cryptosporidium can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. 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 are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. For more information on Cryptosporidium, contact the Safe Drinking Water Hotline (800-426-4791).