

# Loudon Utilities Board Water Quality Report 2023

**Este informe contiene información importante sobre la calidad de agua que consume. Tradúscalo o hable con alguien que lo entienda bien.**

## *Is my drinking water safe?*

Last year, as in years past, your tap water met all U.S. EPA and State drinking water health standards. Loudon Utilities vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

## *What is the source of my water?*

Surface water for the Loudon Utilities system is obtained from the Tennessee River. The water is processed and tested at the water filtration plant and distributed to the system.

The Tennessee Department of Environment & Conservation (TDEC) has prepared a Source Water Assessment Program Report for the untreated water sources. The 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 exceedingly susceptible, moderately susceptible, or slightly susceptible based on geological factors and human activities in the vicinity of the water source. The current rating given to both sources is exceedingly susceptible.

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.

## *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 (1-800-426-4791).

**For more information about your drinking water, please call Customer Service at 865-458-2091.**

## *How can I get involved?*

Loudon Utilities Board meets on the second and fourth Mondays of every month at 4:30 p.m. at the Municipal Building Located at 2480 Hwy 72 N, Loudon, TN. 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 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 TDEC prescribe regulations which limit the number of certain contaminants in water provided by public water systems. Loudon Utilities Board's water treatment processes are designed to reduce any such substances to levels well below any health concern. 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 (1-800-426-4791).

## *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. Loudon Utilities Board 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 865-458-2091.

## *Think before you flush!*

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: <https://www.tnpharm.org/patient-resources/disposing-of-unwanted-drugs/>

## 2022 Water Quality Data

### Definitions

- **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: 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 Limit (BDL)** - laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- **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.
- **Platinum-cobalt units (pcu)** - Color units. A measure of color using platinum cobalt (Pt-Co) standards by visual comparison.
- **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.
- **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.
- **TT** - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
- **T.O.N.** - Threshold Odor Number

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b>Microbiological Contaminants</b>								
Total Coliform Bacteria (RTCR) <sup>1</sup>	No	1		2022	# of positive samples	0	TT Trigger	Naturally present in the environment
E. coli Bacteria <sup>2</sup>	No	0		2022	# of positive samples	0	See Footnote 2	Human or animal wastes
Turbidity <sup>3</sup>	No	0.25	0.06 - 0.25	2022	NTU	n/a	TT (100% <0.3 NTU)	Soil runoff
<b>Inorganic Contaminants</b>								
Barium	No	0.0203		2021	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion from natural deposits
Fluoride	No	0.462	0.411-0.502	2022	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Copper <sup>4</sup>	No	0.117 90 <sup>th</sup> Percentile		2021	ppm	0	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead <sup>4</sup>	No	1.0 90 <sup>th</sup> Percentile		2021	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate <sup>5</sup>	No	0.299		2022	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
Sodium	No	5.68		2022	ppm	n/a	TT	Naturally present in the environment.
<b>Disinfection Byproducts (DBPs), Byproducts Precursors, and Disinfectant Residuals</b>								
TTHM <sup>6</sup> [Total Trihalomethanes]	No	50	20 - 70	2022	ppb	n/a	80	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5)	No	40	10 - 70	2022	ppb	n/a	60	By-product of drinking water disinfection.
Chlorine	No	1.89	0.7 - 2.3	2022	ppm	4 (MRDLG)	4 (MRDL)	Water additive to control microbes
Total Organic Carbon <sup>7</sup>	No	1.0		2022	ppm	n/a	TT	Naturally present in the environment.
<b>Regulated Contaminants with Secondary Drinking Water Standards</b>								
Dissolved Solids	No	88		2021	ppm		500	Runoff/leaching from natural deposits
Color, Apparent	No	<5		2022	pcu		15	Naturally-occurring organic materials
Chloride	No	9.78		2021	ppm		250	Runoff/leaching from natural deposits; seawater influence

Sulfate	No	6.13		2021	ppm		250	Runoff/leaching from natural deposits; industrial wastes
Odor	No	<1		2022	T.O.N.		3	Naturally-occurring organic materials

<sup>1</sup> All follow-up samples were satisfactory. One unsatisfactory (positive) sample does not necessarily represent a public health threat.

<sup>2</sup> E. coli: A system follows the MCL for E. coli for samples unless any of the conditions identified in parts 1 through 4 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.

<sup>3</sup> 100% of our samples were below the turbidity limit. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. We met the treatment technique for turbidity with 100% of monthly samples below the turbidity limit of 0.3 NTU.

<sup>4</sup> During the most recent round of Lead and Copper testing, 0 out of 30 households sampled contained concentrations exceeding the action level (AL).

<sup>5</sup> 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.

<sup>6</sup> While your drinking water meets EPA's standard for trihalomethanes, it does contain low levels. 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. 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).

<sup>7</sup> We have met all treatment technique requirements for Total Organic Carbon (TOC) removal for 2022. The running annual average of monthly treated water TOC samples are less than 2.0 ppm, so we are in compliance with the TOC removal requirement by using the alternative compliance criteria.

## Health Effects

**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. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment(s). One Level 1 assessment(s) was completed. In addition, we were required to take one corrective action and we completed one of these actions. A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**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; Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. 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.

**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.

**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.

**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.

**HAA5. [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.

**Chlorine.** Some people who use water containing chlorine well in excess of the MRDL could experience

**Total Organic Carbon (TOC).** Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.