

# Maynardville Water System Water Quality Report for 2024

## 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 10 of these contaminants. We found all of these contaminants at safe levels.

## What is the source of my water?

Your water is treated groundwater and purchased surface water from Northeast Knox Utility District. 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, moderately susceptible or slightly susceptible based on geologic factors and human activities in the vicinity of the water source. The Maynardville Water System 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 <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.

A wellhead protection plan is available for your review by contacting Michael Payne at the Maynardville Water System between 8:00 A.M. to 4:00 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 Michael Payne at 865-992-3821.**

## How can I get involved?

Our Water Board meets on the second Tuesday of each month at 7:00 p.m. at City Hall, 125 Johnson Rd. 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 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. Maynardville Water System'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 (800-426-4791).

## Lead in Drinking Water

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Maynardville Water System is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact Maynardville Water System at 865-992-3821. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

## Lead Service Line Inventory

A Lead Service Line Inventory has been completed for our system and is accessible by contacting our office during regular business hours.



**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 to 1-865-992-3821.

**Pharmaceuticals In Drinking Water**

Flushing unused or expired medicines can be harmful to your drinking water. Learn more about disposing of unused medicines at

<https://www.tn.gov/environment/sustainability/programs/pharmaceuticals-takeback.html>



# Maynardville Water System 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.
- **Below Detection Level (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 %
- **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.
- **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.

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (RTCR)	No	0		2024		0	TT Trigger	Naturally present in the environment
Turbidity <sup>1</sup>	No	0.29	0.02-0.29	2024	NTU	N/A	TT	Soil runoff
Copper <sup>2</sup>	No	90 <sup>th</sup> % 0.165	0.005- 0.293	2024	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	0.562 Avg.	0.313- 1.06	2024	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead <sup>2</sup>	No	90 <sup>th</sup> % <2.0	< 2.0-5.2	2024	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	No	3.275	3.07-3.48	2024	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment
Nitrate (as Nitrogen)	No	1.115	0.83-1.40	2024	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	No	23.85 Avg.	20.6- 27.10	2024	ppb	N/A	80	By-product of drinking water chlorination
Arsenic	No	<1.0	<1.0	2022	ppb	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Haloacetic Acids (HAA5)	No	10.85 Avg.	3.69- 18.00	2024	ppb	N/A	60	By-product of drinking water disinfection.
Chlorine	No	1.77 Avg.	1.01-2.20	2024	ppm	4	4	Water additive used to control microbes.

<sup>1</sup> 100% of our samples were below the turbidity limit. Turbidity is a measurement of the cloudiness of water.



<sup>2</sup> During the most recent round of Lead and Copper testing 0 out of 20 households sampled contained concentrations exceeding the action level for lead or copper. 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. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems. The lead level is the lowest the lab can detect accurately.

**Northeast Knox Utility Distric**  
**Water Quality Data Table**

Contaminant	Violation Y/N	Level Detected	Unit Measurement	Range of Detection	MCL G	MCL	Likely Source of Contamination	Date of Sample
Turbidity <sup>1</sup>	N	0.047 Annual Average	ntu	0.030 to 0.150	n/a	TT	Soil runoff	Max. Sample 10/2/2024
Copper <sup>2</sup>	N	0.0976 90th perc.	ppm	0.0106 to 0.0976	1.3	AL= 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	07/10/2023 thru 08/18/2023
Sodium	N	12.5	ppm	12.5	n/a	none	Naturally present in the environment	2/20/2024
Fluoride	N	0.57 Annual Average	ppm	0.51 to 0.62	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	01/01/24 thru 12/31/24
Lead <sup>2</sup>	N	1.00 90th perc.	ppb	BDL to 7.73	0	AL= 15	Corrosion of household plumbing systems; Erosion of natural deposits	07/10/2023 thru 08/18/2023
THAA (total Haloacetic acids) <sup>5</sup>	N	24.1 Highest LRAA	ppb	13.9 to 32.8	n/a	60	By-product of drinking water chlorination	01/01/24 thru 12/31/24
TTHM (Total trihalo-methanes)	N	66.2 Highest LRAA	ppb	32.5 to 103.0	n/a	80	By product of drinking water chlorination	01/01/24 thru 12/31/24
Total Organic Carbon <sup>3</sup>	N	1.16 Annual Average	ppm	32.7 % reduction, 25%reqd.	n/a	TT	Decaying organic material	01/01/24 thru 12/31/24
Nitrate	N	0.607	ppm	0.607	10	10	Erosion of natural deposits, runoff from fertilizer, septic runoff	2/20/2024
Chlorine	N	1.26 Annual Average	ppm	0.60 to 2.2	MRD LG 4	MRDL 4	Used as disinfectant in water treatment	01/01/24 thru 12/31/24
Arsenic <sup>4,6</sup>	N	<1.0	ppb	<1.0	n/a	10	Run off from orchards, glass and electronics production waste, erosion of natural deposits	03/18/2020
Total Coliform Bacteria <sup>7</sup>	N	0	p/a	0 -0	0	n/a	Naturally Present in the Environment	01/01/24 thru 12/31/24
Sulfate <sup>6</sup>	N	11.1	ppm	11.1	n/a	250	Naturally present in the environment	03/18/2020

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1- 1703 Turbidity samples were analyzed in 2024 with an annual average of 0.047 NTU, Northeast Knox Utility met the treatment technique for turbidity with 100% of our samples below the turbidity limit of 0.30 NTU.

2- Lead and Copper samples only required every 3 years. 30 samples from various points in the distribution system. 0 sites of 30 exceeded 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. Northeast 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>"*

3- Northeast Knox Utility District met the treatment technique requirements for TOC in Calendar year 2024.

4- Laboratory detection limit 1.0 ppb.

5- *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.* LRAA= Locational Running Annual Average.

6- Sulfate and Arsenic are among 25 inorganic chemicals sampled in 2020.

7- 360 bacteria samples were taken in the distribution system in 2024 with 0 Total Coliform MCL violations. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.