

## TOWN WATER QUALITY REPORT

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423-886-2177

POPULATION 8523

### Town of Signal Mountain Water Quality Report Per Tennessee American Water Results

#### 2022 WATER QUALITY DATA

Matthew Justice, Water Utility Director  
(423) 886-2177

**Este informe contiene informacion importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.** (This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you).

#### **What is the Source of my Drinking Water?**

The source of drinking water (both tap water & bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs & 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.

Tennessee-American Water Company draws surface water from the Tennessee River between Chickamauga Dam & Nickajack Dam. It is then pumped directly to the treatment process with no intermediate steps. It is their goal to protect our water from contamination, and they are working with the state to determine the vulnerability of our water source to potential contamination. Tennessee-American is pleased to report, like so many years prior, that they continue to supply water that meets or surpasses all state and federal drinking water quality regulations for **less than a penny per gallon-an exceptional value.**

The Tn. Dept. of Environment & Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving this water system. 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. Our rating is reasonably susceptible. An explanation of the Tennessee Source Water Assessment

Program, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed at <http://www.tn.gov/environment/programareas/wr-water-resources/water-quality/source-water-assessment.html> or contact TDEC EAC at 1-888-891-8332 (1-888-891-TDEC) to obtain copies of specific assessments.

Tennessee American Water can also be contacted at 1-866-736-6420 to obtain a copy of the source water assessment specifically for our company.

#### **Cryptosporidium:**

Cryptosporidium is a microbial pathogen found in surface water throughout the US. Although Cryptosporidium can be removed through commonly-used filtration methods, US EPA issued a rule in January 2006 that requires systems with higher Cryptosporidium levels in their source water to provide additional treatment.

Tennessee American Water monitored for Cryptosporidium and based upon the results; no additional treatment will be required by this US EPA regulation.

#### **Contaminants That May Be Present In Source Water Include:**

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.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. 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.

**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 may be the result of oil and gas production and mining activities. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### **Additional Health Information**

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 of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791

### **Remember To "Be Water Smart"**

#### **Wise Water Use Tips For Inside Your Home:**

- (1) Fix leaking faucets, pipes, toilets, etc.
- (2) Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- (3) Wash only full loads of laundry.
- (4) Do not use the toilet for trash disposal.
- (5) Take shorter showers.
- (6) Do not let the water run while shaving or brushing teeth.
- (7) Soak dishes before washing.
- (8) Run the dishwasher only when full.

#### **Wise Water Use Tips For Outside Your Home:**

- (1) Use mulch around plants and shrubs.
- (2) Repair leaks in faucets and hoses.
- (3) Use water-saving nozzles.

### **How to Read This Table:**

Starting with a **Substance**, read across. **Year Sampled** is usually in 2022 or prior year. **MCL** shows the highest level of substance (contaminant) allowed.

**MCLG** is the goal level for that substance (this may be lower than what is allowed). **Amount Detected** represents the measured amount (less is better). **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means that the government requirement was met.

**Typical Source** tells where the substance usually originates.

Tennessee American Water conducts extensive monitoring to ensure that your water meets all water quality standards.

The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2022, certain substances are monitored less than once per year because the levels do not change frequently. For help interpreting this table, see the "Table Definitions" section.

### **Table Definitions and Abbreviations**

**N/A:** not applicable - **ppm: (parts per million)** One part substance per million parts water or **mg/L (milligrams per liter)**, explained in terms of money as one penny in \$10,000. **ppb: (parts per billion)** One part substance per billion parts water or **ug/L (micrograms per liter)**, explained in terms of money as one penny in \$10,000,000.

**ppt: (parts per trillion)** One part substance per trillion parts water, or nanograms per liter. **pCi/L: (or picocuries per liter)** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**NTU: Nephelometric Turbidity Unit.** Turbidity is a measure of the clarity of the water. Turbidity in excess of 5 NTU's is just noticeable to the average person.

**A/L:** Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow. **TT**

**(Treatment Technique)**, A required process intended to reduce the level of a contaminant in drinking water. **mrem/year:** Millirems per year (a measure of radiation absorbed by the body). **LRAA (Local Running Annual Average):** Average of the past four most recent quarterly data. **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. **MRDLG: Maximum Residual Disinfectant Level Goal**, the level

of 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. **MRDL: Maximum Residual Disinfectant Level**, or the highest level of a disinfectant routinely allowed in drinking water. Addition of a

disinfectant is necessary for control of microbial contaminants. **BDL:** Below Detection Limit.

### **Water Quality Statement:**

For your information, we have compiled a list in the table, showing what substances were detected in your drinking water during **2022**. Although all of the substances listed below surpasses or meets all federal and state water quality regulations, we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

**Public Participation:** If you are interested in becoming involved in water quality concerns at Tennessee American Water Company, please call them at (423) 771-4705 **Monday-Friday 8AM-5PM.**

**Treatment Byproducts Precursor Removal from TAW Treatment Plant**

Substance (Units)	Year	Range of %		Range of	Compliance	Typical Source of Substance
	Sampled	MCLG	Removal Required	Removal achieved	Achieved	
Total Organic Carbon (ppm)(1)	2022	N/A	TT:≥25%-45%	25%-67%	Yes	Naturally present in the environment

(1) The treatment technique for Total Organic Carbon was met 100% of the time in 2022. Alternative Compliance criteria value used in place of calculated value in some quarters since source or treated water was less than 2.0 mg/L.

**Regulated Substances:**

Substance (Units)	Year	MCLG	MCL	Compliance		Compliance	Typical Source of Substance
	Sampled			Result	Range		
E.coli (1)	2022	0	TT=no confirmed samples	NA	0%	Yes	Human and animal fecal waste
Turbidity (NTU) (3)	2022	0	Single result>1NTU	0.28	0.02-0.28	Yes	Soil Runoff
Turbidity (NTU) (3)	2022	N/A	At least 95% of samples <0.3 NTU	100%	N/A	Yes	Soil Runoff
Chlorine (ppm) (5)	2022	MRDLG= 4	MRDL=4	1.07 (A)	0.40-2.09	Yes	Water additive used to control microbes.
Chlorine (ppm) (TAW Entry Point)	2022	MRDLG= 4	MRDL=4	1.58 (B)	1.58-2.25	Yes	Water additive used to control microbes.
Fluoride (ppm)	2022	4	4	0.68 (Average)	0.65-0.70	Yes	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm) (TAW Entry Point)	2022	10	10 ppm	0.27 (Average)	0.19-0.27	Yes	Runoff from fertilizer use; wastewater discharges; Erosion of natural deposits

**Disinfection By-Products: (7)**

Substance (Units)	Year	MCLG	MCL	Amount	Range of	Compliance	Typical Source
	Sampled			Detected	Detection	Achieved	
HAA's (Haloacetic Acids)	2022	N/A	60 ppb	29.4 (max LRAA)	21.2 to 29.4	Yes	By-product of drinking water disinfection
TTHMs-Total trihalomethanes (ppb)	2022	N/A	80 ppb	53.5 (max LRAA)	37.3-53.5	Yes	By-product of drinking water disinfection

- (1) System is in compliance for E.coli MCL unless it has E.coli positive repeat sample for total coliform positive routine sample, total coliform positive repeat sample for an E.coli positive routine sample, system fails to collect all required routine samples, or system fails to test all positive total coliform samples for E.coli.
- (2) The treatment technique requirement for Total Organic Carbon (TOC) was met 100% of the time in 2022.
- (3) Turbidity is a measure of the cloudiness of the water. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system. During 2020, 100% of all samples taken for turbidity met water quality standard of less than 0.3 NTU.
- (4) The MCL for Beta/photon emitters is written as 4 mrem/year. EPA considers 50 pCi/L as the level of concern for beta emitters.
- (5) Chlorine levels as measured in the distribution system.
- (6) Cryptosporidium is a microbial parasite which is found in surface water throughout the U.S. Although Cryptosporidium can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Monitoring of our source water indicated the presence of cryptosporidium in 0 out of 4 samples tested. 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 have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals 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)

- (7) Disinfection by-products value reported for "amount detected" is the maximum locational running annual average. The range includes all samples analyzed during 2018.
- (8) Some people who drink water containing trihalomethanes in excess of the MCL over many years could have problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
- (A) Data represents the highest quarterly annual running average of chlorine residuals measured in distribution system of compliance samples.
- (B) Data represents the lowest residual entering the distribution system from the TAW surface water treatment plant.

**Tap water samples were collected for lead and copper analyses from 20 homes in the service area: None of 20 homes exceeded the action level.**

Substance (Units)	Year		Amount Detected		Range of Compliance		Typical Source
	Sampled	A/L	MCLG	(90th %tile)	Detections Achieved		
Copper (ppm) (9)	2022	1.3	1.3 ppm	0.0969	BDL-0.0936	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (ppb) (9 & 10)	2022	15	0	0.0012	BDL-0.00192	Yes	

(9) Lead and copper data is from testing in 2022 from 20 homes in the Town of Signal Mtn service area.

(10) 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 household plumbing, Tn. Amer. Water in Chattanooga 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

**Additional Water Quality Parameters Of Interest:**

Substance (units)	Year Sampled	Average Result	Range Detected	Typical Source
Alkalinity (ppm)	2020	61	41-74	
<u>Bromochloroacetic Acid (ppb)</u>	<u>2019</u>	<u>2.1</u>	<u>0.8-3.4</u>	<u>Byproduct of drinking water disinfection</u>
<u>Bromodichloroacetic Acid (ppb)</u>	<u>2019</u>	<u>2.8</u>	<u>1.5-4.1</u>	<u>Byproduct of drinking water disinfection</u>
<u>Chlorodibromoacetic Acid (ppb)</u>	<u>2019</u>	<u>0.08</u>	<u>&lt;0.3-0.4</u>	<u>Byproduct of drinking water disinfection</u>
<u>Dibromoacetic Acid (ppb)</u>	<u>2019</u>	<u>0.05</u>	<u>&lt;0.3-0.47</u>	<u>Byproduct of drinking water disinfection</u>
<u>Dichloroacetic Acid (ppb)</u>	<u>2019</u>	<u>8.9</u>	<u>3.6-15</u>	<u>Byproduct of drinking water disinfection</u>
Hardness (ppm)	2022	75	60-92	Soft 0 - 60 mg/l Moderately Hard 61-120 Hard 121 – 180 Very Hard greater than 180
Hardness (grains/gallon)	2022	4.4	3.5-5.4	Naturally occurring
Iron (ppm) (2)	2022	<0.10	<0.10	Secondary Standard Limit= 0.3 mg/L
Manganese (ppm)(1)	2022	<0.010	<0.010	Secondary Standard Limit= 0.05 mg/L
Sodium (ppm)(1)	2022	8.5	8.1-8.8	Erosion of natural deposits; used in water treatment
Source Water Temperature (deg. celsius)	2022	20.9	10.0-29.5	
pH (units)	2022	7.3	7.1-7.5	

Zinc (ppm)	2022	0.19	0.14-0.24	Secondary standard limit = 5.0 mg/L
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**Unregulated contaminants** are those for which the 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, or contact Tennessee American Water at (423) 771-4705 for 2021 monitoring.

- (1) For healthy individuals, sodium intake from water is not important because a greater intake comes from salt in the diet. However, levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet.
- (2) Substances with Secondary MCLs do not have MCLGs and are not legally enforceable; these limits are primarily established to address aesthetic concerns.
- (3) Manganese test was performed on effluent water leaving the treatment plant and has a secondary MCL of 50 ppb. Essential dietary element.

#### UNREGULATED PFAS CHEMICALS:

Substance (units)	Year Sampled	Average Result	Range Detected	Typical Source
Perfluorooctanoic acid (PFOA)	2022	5.9 ppt	ND – 5.9	Manufactured chemical(s): used in household goods for stain, grease, heat and water resistance.
Perfluorooctane sulfanic acid (PFOS)	2022	9.5 ppt	2.3 – 9.5	
Hexafluoropropylene oxide-dimer acid GenX	2022	ND	ND	
Perfluorobutane sulfonic acid (PFBS)	2022	44.1 ppt	3.1 – 44.1	
Perfluorobutanoic acid (PFBA)	2022	13.6 ppt	3.0 – 13.6	
Perfluorodecanoic acid (PFDA)	2022	ND	ND	
Perfluoroheptanoic Acid (PFHpA)	2022	2.4 ppt	ND – 2.4	
Perfluorohexanoic Acid (PFHxA)	2022	3.9 ppt	ND – 3.9	
Perfluoropentanoic Acid (PFPeA)	2022	4.9 ppt	ND – 4.9	

PFAS are currently not regulated in Tennessee. In 2022, U.S. EPA set health advisory levels for four PFAS chemicals – PFOA (0.004 part per trillion (ppt), PFOS (0.02 ppt), GenX (10 ppt), and PFBS (2,000 ppt). Based on current analytical methods, however, the health advisory levels for PFOA and PFOS are below the level of both detection (determining whether or not a substance is present) and quantitation (the ability to reliably determine how much of a substance is present). This means that it is possible for PFOA or PFOS to be present in drinking water at levels that exceed health advisories even if testing indicates no level of these chemicals. U.S. EPA is currently developing drinking water regulations for PFOA or PFOS that take these challenges into consideration and Tennessee American Water will take appropriate actions to meet any new regulations. Finally, PFAS chemicals are unique, therefore, two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results of another. For more information on PFAS, please visit: <https://www.amwater.com/resources/pdf/american-water-PFAS.pdf>

#### **Substances Expected To Be In Drinking 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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the Tennessee Dept. of Environment and Conservations prescribe regulations which limit the amount of certain contaminants in water provided by public water systems.

U. S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

During 2009 Tennessee-American Water monitored for contaminants listed in the Unregulated Contaminant Monitoring Rule 2 (UCMR 2). The UCMR 2 monitoring revealed no detections for the contaminants as tested by the rule. 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. The results of all unregulated monitoring are available by contacting Tennessee-American Water at 423-771-4705.

**There's a lot more to your water bill than just water:**

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground. The plant where it is treated and tested. The water pumped up Signal Mountain to water customers. The maintenance crews working around the clock to make sure that the water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us- today and well into the future. All for less than a penny a gallon. We do this because we believe we are delivering more than just water service. We deliver a key resource for public health, fire protection, the economy and overall quality of life. It's part of our commitment to you and the community we serve.

**Think before you flush! Drug Disposal Program:**

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.

**Look for more information on Facebook, Twitter or our website.**

Of course, medications can be disposed of at the police department at any time during the year.

**Water System Security:**

We urge the public to report any suspicious activities at any utility facilities, including tanks, fire hydrants, etc. to Town Hall at 886-2177 or 886-2124, Police Department.

**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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA/CDC guidelines on appropriate means to lessen the risk of infection

FOR INFORMATION ABOUT THIS REPORT OR YOUR DRINKING WATER, PLEASE CALL LORI STENZEL AT (423) 771-4705

WATER INFORMATION SOURCES  
**Tennessee-American Water Company:**  
[www.tennesseeamwater.com](http://www.tennesseeamwater.com)  
**Tennessee Dept. of Environment & Conservation**  
[www.tn.gov/environment](http://www.tn.gov/environment)

by Cryptosporidium and other microbial contaminants are available  
**United States Environmental Protection Agency**  
from the EPA's Safe Drinking Water Hotline (1-800-426-4791)

[www.epa.gov/safewater](http://www.epa.gov/safewater)

THE TOWN OF SIGNAL MOUNTAIN HAS ELECTED TO PUBLISH THE CONSUMER CONFIDENCE REPORT ONLINE

IN LIEU OF DIRECTLY MAILING THIS REPORT. THIS REPORT MAY ALSO BE FOUND AT TOWN HALL.

THE SIGNAL MOUNTAIN TOWN COUNCIL IS THE SIGNAL MOUNTAIN WATER BOARD AND MEETS THE SECOND MONDAY OF EVERY MONTH

**Protecting Our Water Supply-Backflow Prevention:**

Signal Mountain Water has a backflow prevention program that ensures proper installation and maintenance of hundreds of backflow prevention devices throughout our system. These devices ensure hazards originating on the customer's properties and from temporary connections do not impair or alter the quality of water in our distribution system. For more information about Signal Mountain Water's backflow prevention program call 423-886-2177.

**Safe Drinking Water Hotline: (800) 426-4791**  
**American Water Works Association:**  
[www.awwa.org](http://www.awwa.org)