

2024 ANNUAL WATER QUALITY REPORT

Erwin Utilities Authority

www.e-u.cc

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Erwin, TN 37650

(423) 743-4563
chepburn@e-u.cc



Delivering Safe, Reliable, and Efficient Services

ERWIN UTILITIES AUTHORITY:



is proud of the safe drinking water it provides to its customers.



is pleased to report that during the calendar year 2024, the results of the testing on the water provided to its customers meets or exceeds the water quality standards established by the State and Federal regulatory agencies.



will notify its customers immediately if there is any reason for concern about its water.



encourages public interest and participation in Erwin's community's decisions affecting their drinking water.

This annual water quality report details the sources of Erwin Utilities' Authority's water, lists the analytical tests results, and includes important information about your drinking water and how it may affect your health.

DRINKING WATER STANDARDS

Drinking water standards are regulations that the United States Environmental Protection Agency (US EPA) sets to control the level of contaminants in the nation's drinking water. These standards are part of the Safe Drinking Water Act's "multiple barrier" approach to drinking water protection, which includes assessing and protecting drinking water sources, protecting wells and collection systems, making sure water is treated by qualified operators, ensuring the integrity of distribution systems, and making information available to the public on the quality of their drinking water.

With the involvement of the US EPA, states, tribes, drinking water utilities, communities, and citizens, these multiple barriers ensure that tap water in the United States and its territories is safe to drink and use. In most cases, the US EPA delegates responsibility for implementing drinking water standards to states and tribes.



WATER SOURCES

In 2024, Erwin Utilities' Authority's Water Department distributed 573,786,000 gallons of water to its customers.

Erwin Utilities' Authority's water system is located within the Nolichucky River Watershed and is supplied by groundwater pumped from four (4) separate locations, one (1) spring water source and three (3) well water sources. The wells are located in the Honaker Formation, which is composed of dolomite, limestone, and shale rock with interbedded layers of gravel.



Erwin Utilities' Authority's goal is to protect its drinking water from contaminants and is working continuously with the State to determine the vulnerability of its water sources for potential contamination.

The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the water sources serving this water system. The SWAP Report assesses the susceptibility of water sources for potential contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources can be rated as reasonably susceptible, moderately susceptible, or slightly susceptible based on geological factors and human activities in the vicinity of the water source. The Erwin Utilities' Authority's 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 US EPA can be viewed online at <https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html>, or Erwin Utilities Authority can be contacted to obtain copies of specific assessments.

SOURCE WATER PROTECTION AREAS

In the Source Water Protection Plan Program, Erwin Utilities Authority has designated source water protection areas to help prevent contamination of the groundwater supply.

The major aim of this program is to increase awareness of the threats of groundwater contamination and to encourage voluntary protection such as conservation measures and environmentally sound waste management system.

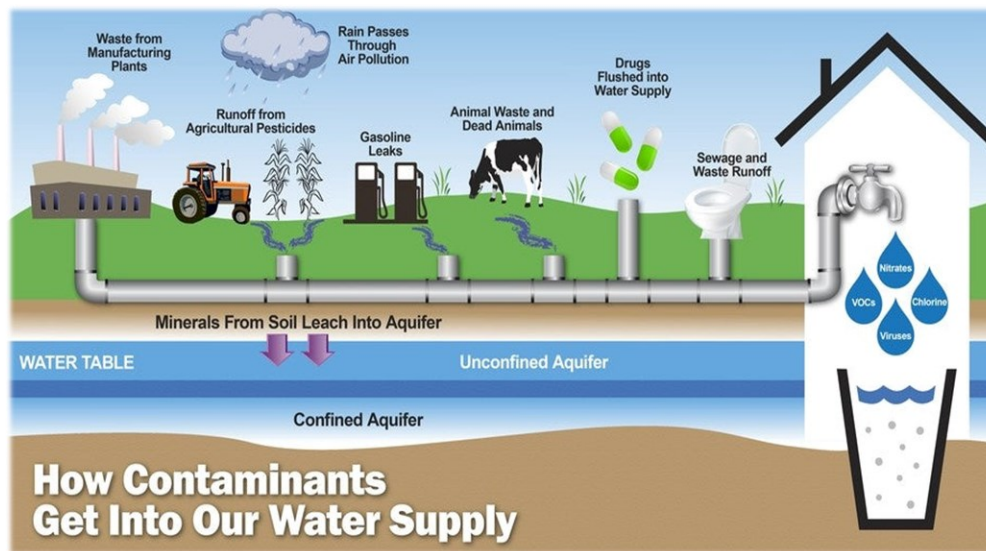


Groundwater may be contaminated by the improper use and disposal of pesticides, used oil, solvents, and other contaminants. Erwin Utilities Authority encourages the use of approved disposal sites for the disposal of these potential contaminants. **The public is requested to report any activities that may result in groundwater contamination to Erwin Utilities Authority at (423) 743-1820.**

PRESENCE OF CONTAMINANTS

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 (EPA's) Safe Drinking Water Hotline at (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 INCLUDE:

Microbial contaminants	such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic Contaminants	such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
Pesticides & Herbicides	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 are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
Radioactive Contaminants	can be naturally occurring or be the result of oil and gas production and mining activities.



TAP WATER

In order to ensure that tap water is safe to drink, the EPA and the Tennessee Department of Environment and Conservation (TDEC) prescribe regulations that limit the amount of certain contaminants in the water provided by public water systems.



BOTTLED WATER

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

VULNERABILITY OF SOME POPULATIONS TO CONTAMINANTS

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 drinking water from their healthcare providers. The EPA and Centers for Disease and Control (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 (800) 426-4791.

LEAD & COPPER ACTION LEVELS IN DRINKING WATER

Erwin Utilities Authority has never violated the Lead or Copper Action Levels in its drinking water. The Action Level for Copper is 1.3 parts per million. Erwin Utilities' Authority's test results in 2023 indicated a range 0.0036 to 0.9940 parts per million, which is much lower than the established Action Level. The Action Level for Lead is 15 parts per billion, and in 2023, Erwin Utilities' Authority's sample test results indicated that Lead levels were in the range of 0.2 to 1.7 parts per billion, which is also much lower than the established Action Level. Lead & Copper testing will again be performed at the end of the third quarter in 2026.

Erwin Utilities Authority complies with all State and Federal regulations on controlling Lead and Copper contaminants in their drinking water. There have been no water quality violations at any of the Erwin Utilities' Authority's drinking water plants.

LEAD IN DRINKING WATER

There has been a national focus on Lead levels in drinking water due to the 2014 water crisis in Flint, Michigan.

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.



Erwin Utilities Authority 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.

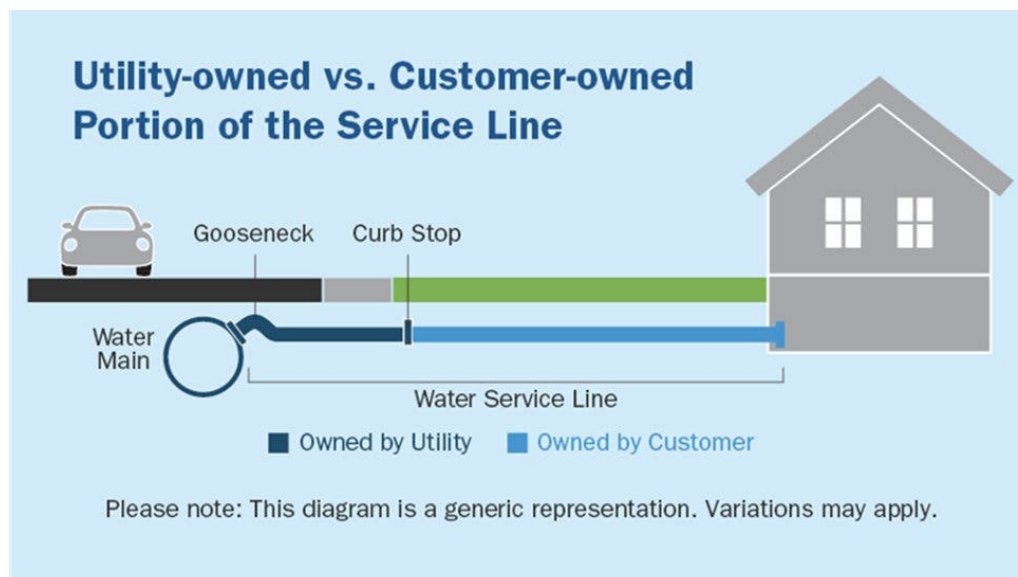
If you are concerned about lead in your water and wish to have your water tested, contact Clay Hepburn, Water Treatment Supervisor at Erwin Utilities Authority at (423) 735-4563 or by email chepburn@e-u.cc

LEAD SERVICE LINE INVENTORY

It is important to note that Erwin Utilities Authority does **NOT** have any known Lead service lines within its distribution system.

Most of the Lead pipes in the United States (U.S.) were installed in the late 1800's. Erwin Utilities' Authority's earliest water mains were installed around 1910, and lead service lines were never used in Erwin's water distribution system. This lack of use is a contributing factor to the low levels of Lead found in Erwin Utilities' Authority's water distribution system. Another factor is Erwin Utilities' Authority's implementation of a successful Corrosion Control Program at its four (4) water treatment plants. This corrosion control program involves utilizing corrosion inhibitors at the water treatment plants and extensively monitoring the water system to detect any signs of corrosion.

Erwin Utilities Authority has completed the initial Lead Service Line Inventory (LSLI) as required by the Environmental Protection Agency (EPA) and the Tennessee Department of Environment & Conservation (TDEC), Division of Water Resources, and no lead or Galvanized Requiring Replacement (GRR) lines were found. Customers can request information about the LSLI at <https://www.e-u.cc/lead servicelineinfo/>.



HEALTH EFFECTS DUE TO LEAD EXPOSURE

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.

MINIMIZE YOUR POTENTIAL LEAD EXPOSURE

You cannot see, smell, or taste lead, and boiling water will not remove lead from your water. Here are some steps you can use to reduce your potential exposure if your plumbing contains lead:



REVIEW YOUR HOUSEHOLD PLUMBING AND SERVICE LINE, especially if you live in an older home. Consult a licensed plumber to assist you in the identification of your plumbing.



FLUSH YOUR TAPS. The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has remained unused for more than six (6) hours, flush the tap with cold water for 30 seconds to two (2) minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



ROUTINELY REMOVE AND CLEAN ALL FAUCET AERATORS.

Turn OFF the water. Unscrew the aerator from the faucet head. Use clean water to wash off any debris or sediment from the aerator screen. Replace the aerator onto the faucet head. Turn ON the water to ensure no water is leaking from the connected thread portion of the aerator.



USE COLD WATER FOR DRINKING AND COOKING. Hot water has the potential to contain more lead than cold water. If hot water is required for cooking, heat the cold water on the stove or in a microwave prior to its use.



LOOK FOR THE "Lead Free" LABEL when replacing or installing plumbing fixtures. Also use potable water components that have a NSF/ANSI 61 rating.



USE A FILTER CERTIFIED BY AN AMERICAN NATIONAL STANDARD INSTITUTE ACCREDITED CERTIFIER to reduce lead in your drinking water such as NSF 53 certified filters.



FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR REPLACING WATER FILTERS in

household appliances, such as refrigerators and ice makers, as well as home water treatment systems and pitchers, i.e., filter replacement frequencies.



FLUSH YOUR WATER AFTER ANY PLUMBING CHANGES. Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.

If you are concerned about lead in your drinking 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>.

CROSS-CONNECTION EDUCATION

Over the next few months, the warm weather will bring people outdoors to work in their yards and gardens and to begin getting their swimming pools ready. Erwin Utilities Authority would like to ensure that its customers are aware of the dangers associated with these activities.

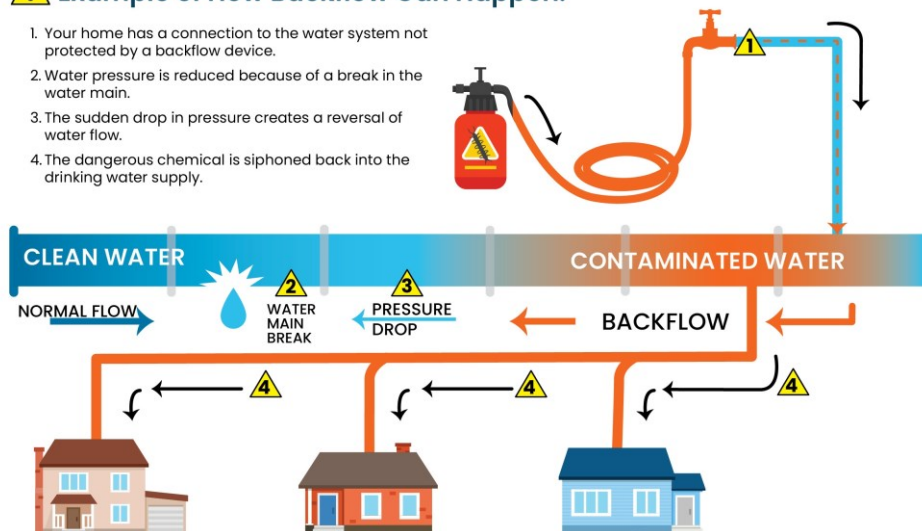
An ordinary garden hose is a common way to contaminate a water supply when the hose is submersed in any liquid or is attached to certain devices used to spray pesticides or herbicides. Submersing a garden hose or attaching the hose to a device can create a cross-connection. A cross-connection is a situation where a possible source of contamination is physically connected to a public water system.



If the end of a garden hose is connected to a chemical container, swimming pool, or other contaminant during a water main break or fire, the chemical or substance can be siphoned back into the water distribution system. This condition, known as back-siphonage, could cause a public health hazard.

⚠️ Example of How Backflow Can Happen:

1. Your home has a connection to the water system not protected by a backflow device.
2. Water pressure is reduced because of a break in the water main.
3. The sudden drop in pressure creates a reversal of water flow.
4. The dangerous chemical is siphoned back into the drinking water supply.



Devices are available to prevent this problem; however, the best solution is to be mindful of how a garden hose is used and stored. Erwin Utilities Authority needs its customers' help to continue to provide a safe supply of water to the receiving community. Remember; never place a garden hose in anything you would not want to drink. For more information on cross-connections and how to protect against them, call Erwin Utilities' Authority's office at (423) 743-1844.

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 them in one of our permanent pharmaceutical takeback bins. There are over 340 take back bins located across the state of Tennessee in all 95 counties.

To find a convenient location, go to:
<http://tdeonline.tn.gov/rxtakeback/>



LOCAL PLACES THAT ACCEPT UNUSED OR EXPIRED MEDICINES

ROLLER PHARMACY

109 North Main Avenue
 (423) 743-7105

8:30 am to 5:00 pm
 Monday through Friday

8:30 am to 1:00 pm
 Saturday

ERWIN POLICY DEPARTMENT

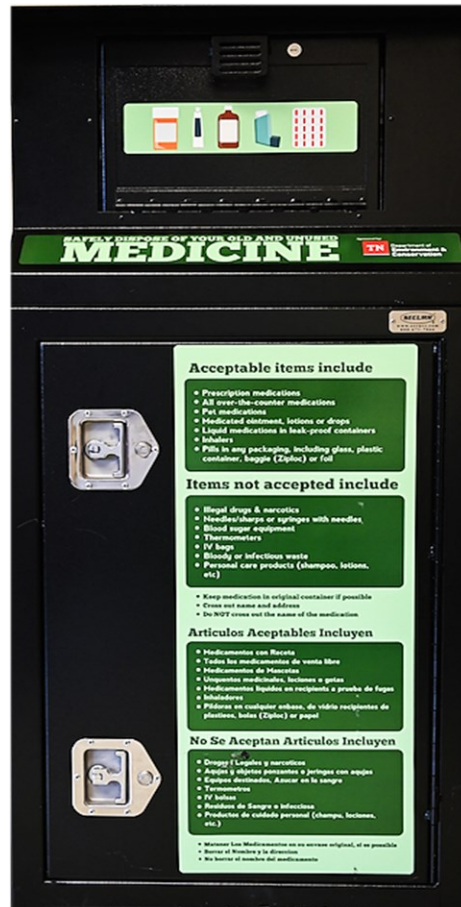
211 North Main Avenue
 (423) 220-7662

8:00 am to 5:00 pm
 Monday through Friday

UNICOI CO. SHERIFF DEPARTMENT

1570 Jackson Love Highway
 (423) 743-1864

8:00 am to 4:30 pm
 Monday through Friday



WATER SYSTEM SECURITY

Following the events of September 11, 2001, we realize that our customers are concerned about the security of their drinking water. Erwin Utilities Authority has conducted a risk and resilience assessment of their water infrastructure and have made changes to improve the safety and reliability of our drinking water to our customers. Erwin Utilities Authority encourages the public to report any suspicious activities at any utility facilities, including treatment plants, tanks, fire hydrants, etc. to (423) 743-1820.

NATIONAL PRIMARY DRINKING WATER REGULATION COMPLIANCE

ERWIN UTILITIES AUTHORITY was in compliance with the National Primary Drinking Water Regulations for the calendar year of 2024 and is a member of the American Water Works Association, Tennessee Association of Utility Districts, and Water Environment Federation.

EXPLANATION OF THE WATER QUALITY TABLES

The Water Quality Tables within this report shows the results of Erwin Utilities' Authority's water quality analyses, and every regulated contaminant that was detected in Erwin's water is listed on the Water Quality Table. The tables contain the name of each contaminant analyzed, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the major sources of such contamination, footnotes explaining Erwin Utilities' Authority's findings, and the units of measurement.

The definitions outlined on the next page are especially important for the definitions for the MCL and MCLG. The Tennessee Division of Water Resources (TDEC) allows us to monitor for some contaminants at least once per year because the concentration of the contaminants does not change frequently. Some of our data listed in the Water Quality Table, though representative, are more than one year old.

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WATER QUALITY TABLE ACRONYMS

AL = Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a system must follow.

MCL = Maximum Contaminant Level, or the highest level of a contaminant that is permissible in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals (MCLGs) as feasible utilizing the best available treatment technology.

MCLG = Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

MDL = Method Detection Limit, or the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from the method blank results.

MRDL = Maximum Residual Disinfectant Level, or 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, or 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.

SMCL = Secondary Maximum Contaminant Level, or the secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

TT = Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

UNITS OF MEASURE

BDL = Below Detection Limit, a level that is below the lowest quantity of a substance that can be detected by a particular laboratory instrument.

NTU = Nephelometric Turbidity Unit – Turbidity is a measure of the clarity of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.

ppb or mcg/L = parts per billion or micrograms per liter, explained in terms of money as one penny in \$10,000,000.

ppm or mg/L = parts per million or milligrams per liter, explained in terms of money as one penny in \$10,000.

pCi/L = picocuries per liter, one trillionth of a Curie; approximately one emission every 27 seconds

WATER QUALITY TABLES

REGULATED CONTAMINANTS – Collected at the Treatment Plants								
CONTAMINANT	DATE TESTED	UNIT	MCLG	MCL	REPORTED LEVEL	RANGE	METHOD DETECTION LIMIT	MAJOR SOURCES
Antimony	12/20/2022	ppm	0.006	0.006	BDL	N/A	0.0003	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	12/20/2022	ppm	0	0.010	BDL	N/A	0.0003	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	12/20/2022	ppm	2	2	0.0840 ¹	0.0430 to 0.0840	2.000	Discharge of drilling wastes and metal refineries; erosion of natural deposits
Alpha Particles	12/10/2024	pCi/L	None - Zero	15	1.75E+00	6.61E-01 to 2.74E+00	N/A	Erosion of natural deposits
Radium-226 & Radium-228 (Combined)	12/10/2024	pCi/L	None - Zero	5	6.69E-01	2.75E-01 to 1.15E+00	N/A	Erosion of natural deposits
Cadmium	12/20/2022	ppm	0.005	0.005	BDL	N/A	0.00005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium, Total	12/20/2022	ppm	0.1	0.1	BDL	N/A	0.0007	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide, Total	12/20/2022	ppm	0.2	0.2	0.002 ¹	BDL to 0.0020	0.002	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Mercury	12/20/2022	ppm	0.002	0.002	BDL	N/A	0.00013	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate	11/13/2024	ppm	10	10	1.633 ²	0.816 to 3.630	0.013	Runoff from fertilizer; Leaching from septic tanks or sewage; Erosion of natural deposits
Selenium	12/20/2022	ppm	0.05	0.05	0.0009 ¹	BDL to 0.0009	0.0005	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium	12/20/2022	ppm	0.0005	0.002	BDL	N/A	0.00010	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Tetrachloroethene	1 per Quarter In 2024	ppb	N/A	5	1.6 ²	1.5 to 1.7	N/A	Leaching from PVC pipes; Discharge from factories and dry cleaners
Total Coliform Bacteria ³	10 per Month May – Dec 2024 ⁴	Sample	Zero	TT	Zero	Zero	N/A	Naturally present in the environment

WATER QUALITY TABLE FOOTNOTES:
¹Highest Level Detected

²Average Level Detected

³New reporting guidelines effective April 1, 2016, under the Revised Total Coliform Rule, PWS 0400-45-01-.41.

⁴Due to Hurricane Helene floods, only seven (7) Total Coliform samples were reported for the month of September.

MAXIMUM CONTAMINANT LEVELS (MCLs) are set to very stringent standards. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL for a lifetime to have a one-in-a-million chance of having the described health effects.

WATER QUALITY TABLES

REGULATED CONTAMINANTS – Collected in the Distribution System								
CONTAMINANT	DATE TESTED	UNIT	MCLG	MCL	REPORTED LEVEL	RANGE	MDL	MAJOR SOURCES
Chlorine	10 per Month In 2024	ppm	4	4	2.29 ¹	1.00 to 2.90	0.03	A chemical used as a disinfectant
Fluoride	1 per Quarter In 2024	ppm	4	4	0.617 ¹	0.451 to 0.784	0.004	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer factories
Haloacetic Acids (HAAs)	8 per Year In 2024	ppb	N/A	60.0	3.0 ¹	1.0 to 5.0	0.2	By-products of drinking water chlorination
Total Trihalomethanes (TTHMs)	8 per Year In 2024	ppb	N/A	80.0	6.4 ¹	1.4 to 12.4	0.1	By-products of drinking water chlorination

WATER QUALITY TABLE FOOTNOTE:
¹Average Level Detected

CHLORINE: A public water system is compliant with the Maximum Residual Disinfectant Level (MRDL) if the Running Annual Average (RAA) of monthly averages of samples taken in the distribution system computed quarterly is less than or equal to the MRDL.

FLUORIDE: The Tennessee Department of Environment & Conservation (TDECs) recommends a target of 0.70 mg/L for this contaminant. Erwin Utilities Authority discontinued community water fluoridation January 1, 2025.

TOTAL TRIHALOMETHANES (TTHMs) and HALOACETIC ACIDS (HAAs): Compliance is based on the highest LRAA (Locational Running Annual Average) that is calculated quarterly. The highest quarterly LRAA is the measured value in the table.

TURBIDITY – Monitored at the Water Treatment Plants								
CONTAMINANT	DATE TESTED	UNIT	MCLG	MCL	REPORTED LEVEL	RANGE	METHOD DETECTION LIMIT	MAJOR SOURCES
Turbidity ¹	See Note	NTU	N/A	TT	0.37 ³	0.01 to 0.37	N/A	Soil runoff
Turbidity ²	See Note	NTU	N/A	TT	0.19 ³	0.01 to 0.19	N/A	Soil runoff

WATER QUALITY TABLE FOOTNOTES:
¹ Shows tests' results on Erwin Utilities' Authority's finished water at Elks Club Water Plant.

² Shows tests' results on Erwin Utilities' Authority's finished water at Birchfield, O'Brien, and Howard C. Brown Water Plants.

³ Maximum Level Detected

TURBIDITY: Turbidity is the clarity of water. It is measured as an indicator of water quality and the effectiveness of the filtration system. Compliance with the turbidity Treatment Technique (TT) is achieved when 95% of four-hour filtered water readings are 0.3 NTU or lower and no readings are greater than 1 NTU.

LEAD & COPPER MONITORING PROGRAM – At least 30 Tap Water Samples Collected at Customers' Taps Every Three Years								
CONTAMINANT	DATE TESTED	UNIT	MCLG	AL	REPORTED LEVEL	RANGE	MDL	MAJOR SOURCES
Copper ¹	7/31/2023	ppm	1.3	1.3	0.3478 ²	0.0036 to 0.9940	0.0003	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead ¹	7/15/2020	ppb	Zero	15	0.60 ²	0.20 to 1.7	0.20 ³	Corrosion of household plumbing systems; Erosion of natural deposits

WATER QUALITY TABLE FOOTNOTES:
¹ During the most recent round of Lead and Copper testing, all thirty (30) samples were below the Action Level.

² 90th Percentile

³ Level is the lowest the laboratory can detect accurately.

LEAD & COPPER: Compliance is achieved when at least 90% of samples collected from water standing in contact with plumbing for at least 6 hours are below the Action Level.

WATER QUALITY TABLES

ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST – Water Leaving the Water Treatment Plants							
CONTAMINANT	DATE TESTED	UNIT	SMCL	REPORTED LEVEL	RANGE	MDL	NOTICEABLE EFFECTS ABOVE THE SMCL
Aluminum	12/20/2022	ppm	0.05 – 0.50	0.065 ²	0.064 to 0.066	0.031	Colored water
Chloride	12/20/2022	ppm	250	10.743 ²	4.12 to 17.20	0.202	Salty taste
Color	12/20/2022	Pt-Co ⁴	15 Color Units	BDL	N/A	5	Visible tint
Copper	12/20/2022	ppm	1.0	0.0022 ²	0.0004 to 0.0068	0.0003	Metallic taste; blue-green staining
Fluoride	12/20/2022	ppm	2.0	0.828 ²	0.805 to 0.852	0.086	Tooth discoloration
Foaming Agents (Surfactants)	12/20/2022	ppm	0.5	0.051 ²	BDL to 0.051	0.041	Frothy, cloudy; bitter taste; odor
Iron	12/20/2022	ppm	0.3	BDL	N/A	0.028	Rusty color; sediment; metallic taste; reddish or orange staining
Manganese	12/20/2022	ppm	0.05	BDL	N/A	0.001	Black to brown color; black staining; bitter metallic taste
Odor	12/20/2022	TON ³	3 TON ³	BDL	N/A	1	“rotten egg,” musty or chemical smell
pH	12/20/2022	Standard Units	6.5 – 8.5	7.7 ²	7.6 to 7.7	N/A	Low pH: bitter metallic taste; corrosion High pH: slippery feel; soda taste; deposits
Silver	12/20/2022	ppm	0.1	BDL	N/A	0.00002	Skin discoloration; graying of the white part of the eye
Sulfate	12/20/2022	ppm	250	7.04 ²	3.64 to 10.00	0.190	Salty taste
Total Dissolved Solids (TDSs)	12/20/2022	ppm	500	166 ²	105 - 206	51	Hardness; deposits; colored water; staining; salty taste
Zinc	12/20/2022	ppm	5	0.016 ²	0.009 to 0.022	0.008	Metallic taste

WATER QUALITY TABLE FOOTNOTES:
¹Average Level Detected

²Highest Level Detected

³Threshold Odor Number

⁴A color scale used as a unit of measurement for analyzing the “yellowness” in a liquid.

These commonly requested constituents are provided for informational purposes only. Some substances may have a Secondary Maximum Contaminant Level (SMCL), a non-mandatory water quality standard for parameters with no adverse health impacts. Levels above the SMCL may cause aesthetic, cosmetic, or technical effects.

UNREGULATED CONTAMINANTS – Water Leaving the Water Treatment Plants								
CONTAMINANT	DATE TESTED	UNIT	MCLG	MCL	REPORTED LEVEL	RANGE	MDL	MAJOR SOURCES
Chloroform	1 per Quarter in 2024	ppb	70	N/A	1.1 ¹	0.8 to 1.3	N/A	By-products of drinking water chlorination; Discharge from chemical companies and paper mills
Lithium ²	2024	ppb	N/A	N/A	47.1 ¹	43.1 to 51.1	5.00 ³	Natural occurring metal found in rock and soil
Sodium	11/13/2024	ppm	N/A	N/A	5.41 ¹	1.78 to 10.50	N/A	Derived geologically from leaching of surface and underground deposits of salt and decomposition of various minerals; Human activities contribute through de-icing and washing products

WATER QUALITY TABLE FOOTNOTES:

ERWIN UTILITIES AUTHORITY also tested for thirty-nine (39) Unregulated Volatile Organic Contaminants (VOCs).

¹Average Level Detected.

²Howard C. Brown Water Treatment Plant Finished Water Sample

³Practical Quantitation Limit Value (Method Reporting Limit)

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 EPA Safe Drinking Water Hotline at (800) 426-4791.

WATER QUALITY TABLES

SELECTED PER- AND POLY – FLUOROALKYL SUBSTANCES (PFAS) – Collected at the Water Treatment Plants								
CONTAMINANT	DATE TESTED	UNIT	MCLG	MCL	REPORTED LEVEL	RANGE	PQL ⁸	MAJOR SOURCES
HFPO-DA ² (commonly known as GenX Chemicals)	2024	ppb	0.01	0.01	BDL	N/A	0.0020	<p>Waste Sites: Soil and water at or near landfills, disposal sites, and hazardous waste sites.</p> <p>Fire Extinguishing Foam: Used in training and emergency response events at airports and firefighting training facilities.</p> <p>Industrial Facilities: Chrome plating, electronics, and certain textile and paper manufacturers that produce or use PFAS.</p> <p>Consumer Products: Stain or water repellent, or non-stick products, paints, sealants, and some personal care products.</p> <p>Food Packaging: Grease-resistant paper, microwave popcorn bags, pizza boxes, and candy wrappers.</p> <p>Biosolids: Fertilizers from wastewater treatment plants used on agricultural lands can affect ground and surface waters.</p> <p>Consumption of Foods: Fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.</p>
PFHxS ³	2024	ppb	0.01	0.01	0.0033 ¹	0.0030 to 0.0035	0.0026	
PFNA ⁴	2024	ppb	0.01	0.01	BDL	N/A	0.0034	
PFOA ⁵	2024	ppb	Zero	0.004	0.0038 ¹	0.0034 to 0.0041	0.0020	
PFOS ⁶	2024	ppb	Zero	0.004	0.0064 ¹	0.0061 to 0.0067	0.0020	
PFBS ⁷	2024	ppb	No Individual MCLG	No Individual MCL	0.0069 ¹	0.0062 to 0.0075	0.0020	

WATER QUALITY TABLE FOOTNOTES:

¹Average Level Detected of Finished Water at Howard C. Brown Water Treatment Plant.

²Hexafluoropropylene oxide dimer acid

³Perfluorohexane sulfonate

⁴Perfluorononanoic acid

⁵Perfluorooctanoic acid

⁶Perfluorooctane sulfonate

⁷Perfluorobutane sulfonate

⁸Practical Quantitation Limit (Method Reporting Limit)




See Hazard Index PFAS information https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr_fact-sheet_hazard-index_4.8.24.pdf

PFAS CONTAMINANTS: These contaminants are manufactured chemicals that have been used in industrial and consumer products since the 1940s. The health effects on humans due to PFAS exposures is currently being researched. Studies have shown that exposures to certain levels of PFAS may lead to increased risks of some cancers, including prostate, kidney, and testicular cancers, increased cholesterol levels and/or risk of obesity, reduced ability of body's immune system to fight infections, low birth weights, accelerated puberty, bone variations, or behavioral changes, and decreased fertility or increased high blood pressure in pregnant women.

To learn more about PFAS, go to <https://www.epa.gov/pfas>.

To obtain information on how to reduce PFAS in your drinking water using a home filter, go to <https://www.epa.gov/system/files/documents/2024-04/water-filter-fact-sheet.pdf>.

STEPS TO SAVING WATER

	<p>FIX LEAKY FAUCETS. One drop every 2 seconds from a leaky faucet wastes approximately 2 gallons of water per day.</p>
	<p>DON'T RUN FAUCETS WHILE BRUSHING YOUR TEETH OR WASHING YOUR DISHES. Just turning off the water while brushing your teeth can save over 200 gallons of water per month.</p>
	<p>RUN WASHING MACHINES AND DISHWASHERS ONLY ON FULL LOADS or select the properly sized wash cycle for the current laundry load.</p>
	<p>INSTALL WATER-SAVING SHOWER HEADS AND FAUCET AERATORS in the bathroom and kitchen.</p>
	<p>DON'T WASH YOUR CAR AT HOME. An automatic car wash uses much less water than washing your car at home.</p>
	<p>TURN OFF AUTOMATIC LAWN AND GARDEN SPRINKLERS when it is raining outside and at the end of the growing season.</p>

PUBLIC INVOLVEMENT

For more information about Erwin's drinking water and for opportunities to become involved, please contact Clay Hepburn, Water Treatment Supervisor, by calling (423) 735-4563 or by writing to: P.O. Box 817, Erwin, TN 37650-0817. Board of Public Utilities meetings are held on the fourth Thursday of each month at the Erwin Utilities' Authority's Main Office at 4:30 p.m. The public is welcome.

ERWIN UTILITIES AUTHORITY BOARD

Thomas D. Harris	Chairperson
D. Scott Charles	Member
Kevin Horton	Member
Russell D. Brackins	Member
Gary Chandler	Member
Lee H. Brown	President & CEO

Este informe contiene informaciòn importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

WATER INFORMATION RESOURCES

American Water Works Association

www.awwa.org

Center for Disease Control and Prevention

<https://www.cdc.gov/drinking-water/about/index.html>

EPA Ground Water & Drinking Water

www.epa.gov/safewater

EPA Drinking Water Regulations and Contaminants

<https://www.epa.gov/sdwa/drinking-water-regulations-and-contaminants>

EPA Safe Drinking Water Hotline

(800) 426-4791

Erwin Utilities Authority – Water Information

<https://www.e-u.cc/info/#waterinfo>

Erwin Utilities Authority - Lead Service Line Inventory

<https://www.e-u.cc/lead servicelineinfo/>

Tennessee Department of Environment & Conservation, Division of Water Resources

<https://www.tn.gov/environment/program-areas/wr-water-resources-home.html>

Tennessee Department of Environmental & Conservation, Johnson City Environmental Field Office

Counties Served: *Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, & Washington*

<https://www.tn.gov/environment/contacts/about-field-offices/field-offices/johnson.html>

National Library of Medicine/National Institute of Health

www.nlm.nih.gov/medlineplus/drinkingwater.html

Tennessee Department of Mental Health & Substance Abuse Services

<https://www.tn.gov/behavioral-health/substance-abuse-services/prevention/take-back-box.html>

Water Environment Federation

<https://www.wef.org/>