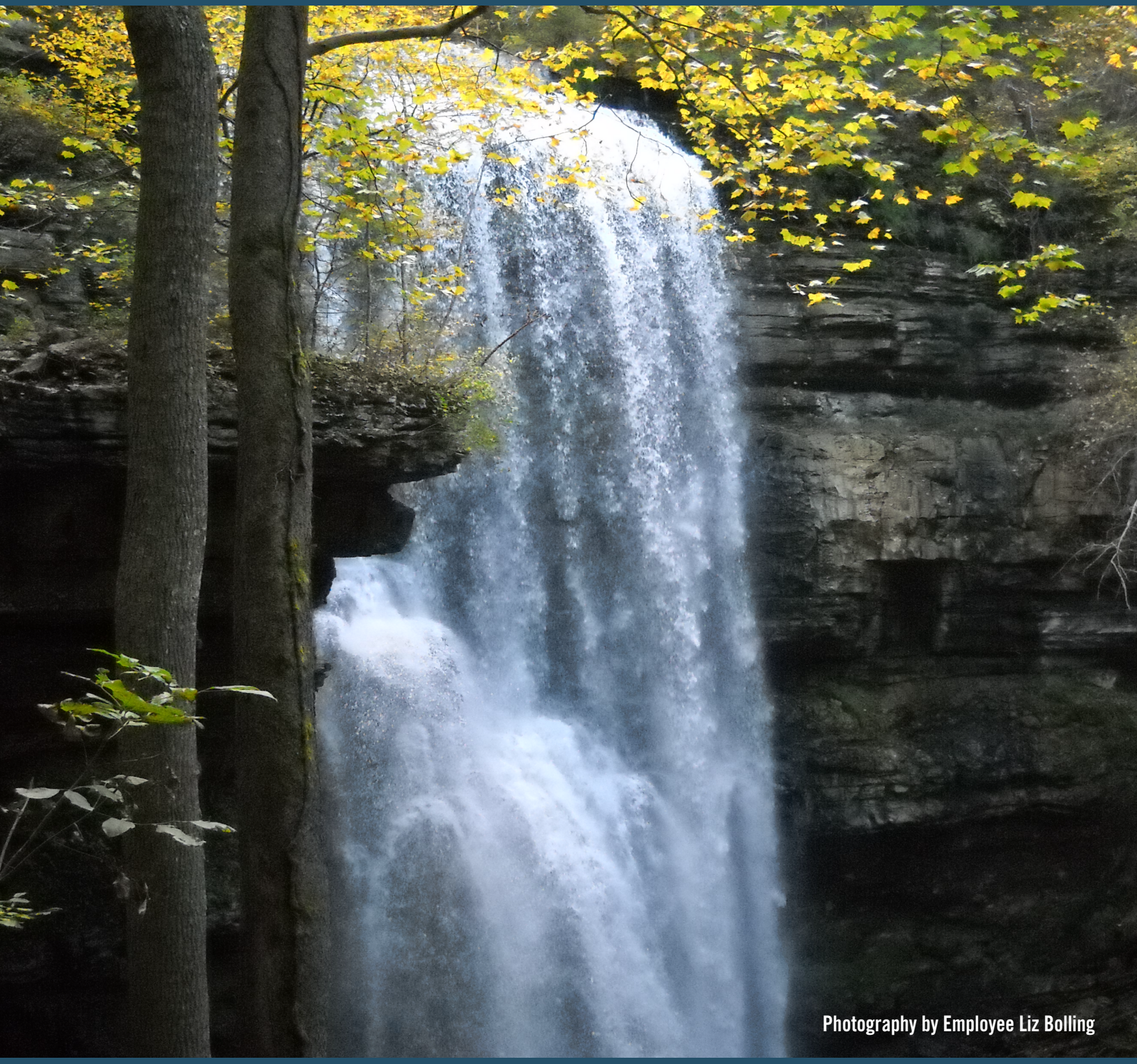
MADISON SUBURBAN UTILITY DISTRICT

2024 ANNUAL DRINKING WATER QUALITY REPORT

TEST RESULTS FROM 2023

SINCE 1939, THE MADISON SUBURBAN UTILITY DISTRICT (MSUD) has remained committed to safeguarding the public water system as an essential part of our mission to protect public health.

MSUD takes immense pride in providing you with the highest quality drinking water.



Photography by Employee Liz Bolling

Madison Suburban Utility District • 108 W. Webster St., Madison, TN 37115 • 615.868.3201 • www.msud.net

NEW MSUD HEADQUARTERS

We are excited to share that after 85 years of service to this community, MSUD will finally be operating out of an office that mirrors the community and customers we serve! A while back we procured and began repurposing a movie theater on Myatt Drive in the Rivergate area. We are scheduled to move to this location in the summer/fall of 2024. The new building will have more customer service windows, two drive-through digital teller windows, and an after-hours drop box. It has been a great learning experience and journey to complete this much needed project. We are also ecstatic to have an opportunity to partner with local Chambers of Commerce and host events in the future.

HOW DO I CONTACT MADISON SUBURBAN UTILITY DISTRICT?

MSUD Business Office:
615-868-3201, Monday – Friday, 7:30-4:00
or visit **www.msud.net**

AFTER HOURS EMERGENCIES: call 615-865-1636

Questions about this report or Water Quality? **615-865-1636**

Information for non-English Speaking Populations:
Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

The District's Board of Commissioners meets each month at the Business Office, 108 W. Webster St, Madison, TN 37115. These meetings are open to the public with the specific dates and times listed at **www.msud.net**.

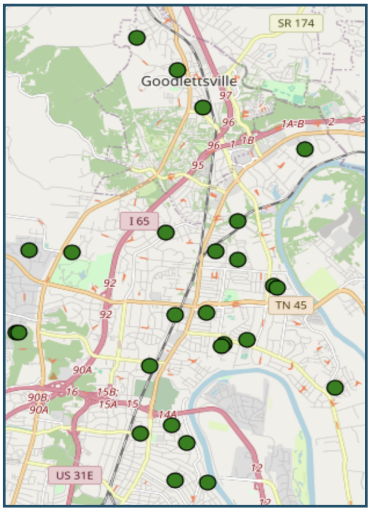
NUMEROUS WAYS TO PAY YOUR BILL

Bank Draft: download form at **www.msud.net**
Online Secure Payment: go to **www.msud.net**
Automated Telephone System: **615-868-3201**
Mail Payment to Address: P.O. Box 306140, Nashville, TN 37230-6140
Payment Drop Box: for checks or money orders only at
108 W. Webster Street, Madison, TN 37115
Lobby Open Tuesday and Thursday 7:30-4:00

WATERSHED AWARENESS

A watershed is the land through which all water flows as it enters a body of water. MSUD's source water, Cumberland River, is part of the Cheatham Reservoir Watershed. Following simple pollution prevention methods can reduce the negative impact our daily activities can have on our water quality. Simple things for example: limit use of fertilizers and pesticides, scoop the poop, composting, recycle, use drip pans when draining your own fluids, reduce erosion by planting native shrubs and trees and use a trash can when disposing of used cigarette filters. Cigarette filters are the No#1 most littered plastic item in the world releasing plastic and other harmful chemicals in waterways. Be aware of what goes on the ground will eventually find its way to a water source.

MSUD CONTINUES UTILIZING ASTERRA SATELLITE LEAK DETECTION TECHNOLOGY



MSUD continues our partnership with ASTERRA, a satellite imaging technology company to help with efforts in leak detection and water conservation, and to better meet our objective of reducing water loss.

Use of this technology is a pro-active leak detection program that increases the efficiency of traditional acoustic leak detection programs by prioritizing work locations and offering quicker response times. MSUD's distribution system is comprised of approximately 285 linear miles of pipe (mains and services combined).

During the most recent scan, ASTERRA identified around 94 Points of Interest (PoI). MSUD's organic assets have investigated all identified PoI's and 92% of the leaks found were underground and not visible. This is a huge success! The identification and repair of these leaks saved over 43 million gallons of water from being lost. This is one of many methods that MSUD uses to be good stewards of a finite natural resource.

The screenshot to the left is a sample of some of the leaks found and repaired by MSUD.

LEAD AND COPPER SURVEY

The U.S. Environmental Protection Agency (EPA) finalized its Lead and Copper Rule Revisions (LCRR) in 2021, establishing requirements for water utilities of all sizes, including those without lead service lines (LSL) in their systems to create an inventory list of customer service lines. Our water mains are ductile iron and cast iron, with a small amount of PVC. Our service lines to your meter are copper. MSUD is not responsible for plumbing from the meter to residences and businesses.

WE CONTINUE TO NEED YOUR HELP

We need your assistance to identify plumbing material used from your meter to your faucets. Lead was possibly used in soldering copper pipes prior to 1989. Homes and businesses built prior to this date may have lead joints in their service lines and plumbing. The data collected will be used for reporting the requirements by the Lead and Copper Survey Rule of 2021. Please help us to collect this data by filling out a short one-page survey. Click on the link below and it will take you directly there or scan the QR Code.

https://survey.us.confirmit.com/wix/0/p870387120220.aspx

Self-reporting is the easiest and least intrusive way for us to inventory your lines. **We appreciate your support and help in this matter.**

Lead Levels—***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. MSUD is responsible for providing high quality drinking water but cannot control the variety of materials used in private plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your faucet for 30 seconds to two 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 at **1-800-426-4791** or at **https://www.epa.gov/safewater/lead**.

CONTAMINANTS IN BOTTLE AND TAP

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.**

In order to ensure that your water is safe to drink, the EPA and the TN Department of Environment and Conservation (TDEC) prescribe regulations which 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.

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 drinking water from their health care providers. EPA/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 **1-800-426-4791.**

WHAT IS THE SOURCE OF MY WATER?

Your water comes from the Cumberland River. As a surface water source, it has been rated as highly susceptible to potential contamination based on geologic factors and human activities in the vicinity. A source water assessment has been conducted and is available for review at the Madison Suburban Utility District offices.

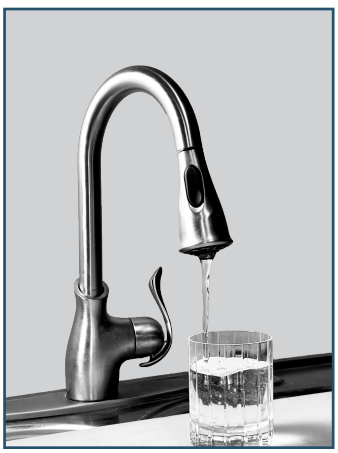
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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, which may come from sewage treatment plants, septic systems, agricultural livestock operation, 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, stormwater runoff, and residential uses.
- Organic Chemical Contaminants - including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive Contaminants - which can be naturally occurring or be the result of oil and gas production and mining activities.

ELECTRONIC REPORT

This report is available electronically at our website: **https://msud.net/wp-content/uploads/2024/03/madccr2024.pdf**

You may also email **msud@msud.net** or call the office at **615-868-3201** to request a copy be mailed.



REQUIRED EPA MONITORING UNDER THE PRIMARY DRINKING WATER STANDARD

Every year we monitor the presence of over 100 compounds in your water, before, during and after treatment.

MONITORED AT THE TREATMENT PLANT

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Nitrate	No	01/10/23	0.521	ppm		10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Sodium	No	07/06/23	9.35	ppm				Erosion of natural deposits; used in water treatment
Turbidity[1]	No	Daily	0.09	NTU	0.02-0.09	TT		Soil Runoff
Total Organic Carbon[2]	No	Monthly	43%			TT ≥ 25% removal	TT	Naturally present in the environment

(1) 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 require ment for turbidity with 100% of daily samples below the limit of 0.15 NTU. (2) We met the treatment technique requirement for total organic carbon removal in 2023.

MONITORED AROUND THE DISTRICT

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Fluoride	No	quarterly	0.66	ppm	0.49-1.02	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Total Trihalomethanes[4] (TTHM)	No	quarterly	60 Highest LRAA	ppb	20-60	80 LRAA		By-product of drinking water chlorination
Total Haloacetic Acids[4] (HAA5)	No	quarterly	40 Highest LRAA	ppb	10-40	60 LRAA		By-product of drinking water chlorination
Total Coliform Bacteria (RTCR)	No	2023	0			TT - Trigger	0	Naturally present in the environment

(4) Highest Locational Running Annual Average (LRAA) calculated quarterly.

Contaminant	Violation	Date Collected	Average	Unit of Measure	Range	MRDL	MRDLG	Likely Sources of Contaminants
Chlorine	No	2023	1.68	ppm	0.43-2.80	4.0	4.0	Water additive used to control microbes

MONITORED AT THE CUSTOMER'S FAUCET

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Copper[5]	No	2023	0.183	ppm	0.021-0.183	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead[5]	No	2023	BDL <0.2	ppb	<0.2	AL=15	0	Corrosion of household plumbing systems, erosion of natural deposits

(5) Level detected is 90th percentile. During the most recent testing, 0 out of 30 households sampled contained concentrations exceeding the action level (AL). Lead and copper monitoring is conducted on various consumer faucet samples as required every three years.

DATA TABLE DEFINITIONS

- **(ppm)** – Parts per million or (mg/L) Milligrams per liter: This is explained as a relation to time and money as one part per million corresponds to one minute in two years, or one penny in $10,000.
- **(ppb)** – Parts per billion or (µg/L) Micrograms per liter: This is explained as a relation to time and money as on part per billion corresponds to one minute in 2,000 years, or one penny in $10,000,000.
- **(MCL)** – Maximum Contaminant Level: 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.
- **(MCLG)** – Maximum Contaminant Level Goal: 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.
- **(NTU)** – Nephelometric Turbidity Unit: This is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **(TT)** – Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- **(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.
- **(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.
- **(BDL)** – Below Detection Limit: Laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- **(AL)** – Action Level: The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

THINK BEFORE YOU FLUSH!

Flushing unused or expired medicines can be harmful to your drinking water. Disposing of medicines in the trash can also eventually lead to leaching in the ground water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of Tennessee's waterways by disposing your unused medicine in one of our permanent pharmaceutical take back bins. There are over 340 take back bins located across the state in all 95 counties. To find a convenient location please visit: https://tdeconline.tn.gov/rxtakeback.