MADISON SUBURBAN UTILITY DISTRICT

2025 ANNUAL DRINKING WATER QUALITY REPORT

TEST RESULTS FROM 2024

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 and provide you with the highest quality drinking water.

In 2024 MSUD AGAIN EARNED A 100% SCORE from the TN Department of Environment and Conservation (TDEC) during the State performed Sanitary Survey on the water system's performance to regulatory and operational standards.

Photography by Employee Liz Bolling

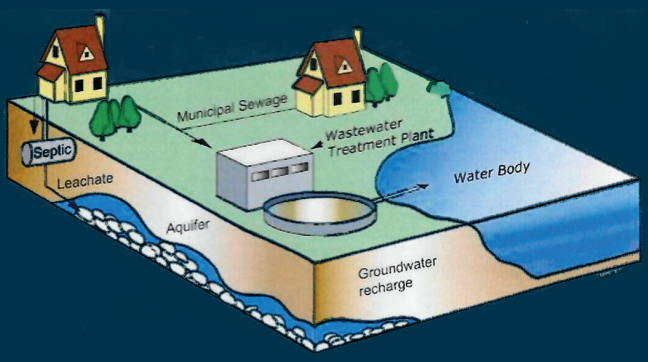
As the recipient of the Greater Tennessee Builders and Contractors Association Eagle Award of Excellence, MSUD's new office facility now allows us to partner with area Chambers of Commerce and Utility Associations to host training and community events.

If you have any questions about this Consumer Confidence Report or questions about water quality, please contact our Water Treatment Plant at 615.865.1636.

Madison Suburban Utility District • 721 Myatt Drive, Madison, TN 37115 • 615.868.3201 • www.msud.net

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 the 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.



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.

HOW DO I CONTACT MADISON SUBURBAN UTILITY DISTRICT?

MSUD Business Office: 721 Myatt Drive, Madison, TN 37115
615-868-3201, Monday – Friday, 7:30-4:00
or visit **www.msud.net**.

AFTER HOURS EMERGENCIES *or* **Questions about this report or Water Quality? Call 615-865-1636**

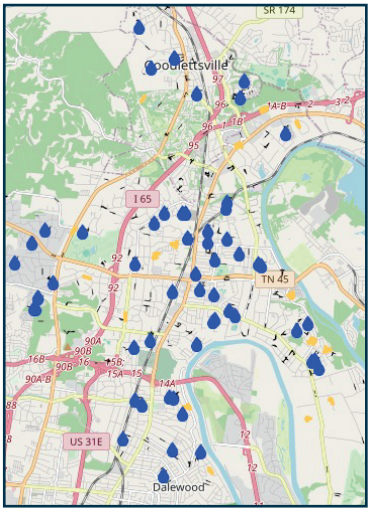
NUMEROUS WAYS TO PAY YOUR BILL

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
Lobby Open Tuesday and Thursday 7:30-4:00
Two Payment Drop Boxes: for checks or money orders at
721 Myatt Drive, Madison, TN 37115

MSUD's new business office has two drive-thrus with video teller windows. In addition there is a payment drop box at the drive thru for checks or money orders, and a second stand-alone payment drop box located at the front of the building for checks or money orders.

The District's Board of Commissioners meets each month at the Business Office, 721 Myatt Drive, Madison, TN 37115. These meetings are open to the public with the specific dates and times listed at **www.msud.net.**

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.

The 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 309 linear miles of pipe (mains and services combined). During the most recent scan, ASTERRA identified around 93 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 once again a tremendous success! **The identification and repair of these leaks saved over 58 million gallons of water from being lost.** This is one of the 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 SERVICE LINE INVENTORY

The Lead Service Line Inventory (LSLI), a requirement of the EPA (Environmental Protection Agency) and TDEC (TN Department of Environment and Conservation) for all public water systems, *that we asked our customers to complete,* is a means of establishing an inventory to identify the materials of customer service lines connected to the public water distribution system past the meter, and to your home or business. The purpose was to identify areas with the greatest potential for lead contamination of drinking water and most in need of replacement. **MSUD has detected no lead in our system.** Our water mains are ductile iron and cast iron, with a small amount of PVC. Our service lines to our customers meters are copper. MSUD is not responsible for plumbing from the meter to residences and businesses. This is why the Lead Service Line Inventory is so important. The LSLI was completed *at the end* of 2024 and the finished ***Service Line Inventory*** report can be found on our *website,* ***www.msud.net*** under the title **Resources**.

LEAD EDUCATIONAL STATEMENT

Lead in drinking water is primarily from materials and parts used in old service lines and in home plumbing or fixtures. Madison Suburban Utility District is responsible for providing high quality drinking water but cannot control the variety of materials used in the plumbing or fixtures in your home. You can reduce your risk of exposure by identifying and removing materials containing lead within your home plumbing or fixtures. Using a filter, certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead, is effective in reducing lead exposure. 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 are concerned about lead in your water and wish to have your water tested, contact MSUD's Water Treatment Plant at 615-865-1636. Our Water Plant employees can help answer your questions or recommend a lab that can test your water for lead. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at **www.epa.gov/safewater/lead.**

UPDATED LEAD HEALTH EFFECTS

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant women, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems. Contact your health care provider for more information about your risks.

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.**

WATERSHED AWARENESS

A watershed is the land through which all water flows as it enters a body of water. MSUD's source water, the 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. Be aware of what goes on the ground will eventually find its way to a water source. We ask that all our customers help us protect our water sources, which are the heart of our community. If you notice something unusual or out of the ordinary, please contact us. **THIS IS YOUR WATER TOO!**

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, upon request, for review at the Madison Suburban Utility District Office.

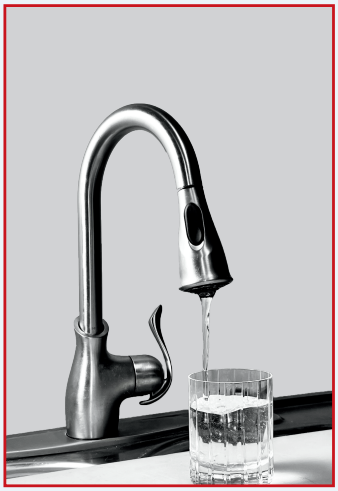
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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/2025/03/madccr2025.pdf

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



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.

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.

2024 TEST RESULTS

MONITORED AT THE TREATMENT PLANT

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Nitrate	No	1/8/2024	0.386	ppm		10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Sodium	No	7/1/2024	9.64	ppm				Erosion of natural deposits; used in water treatment
Turbidity[1]	No	Daily	0.13	NTU	0.02-0.13	TT		Soil Runoff
Total Organic Carbon[2]	No	Monthly	38%			TT ≥ 25%	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 requirement 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 2024.

MONITORED AROUND THE DISTRICT

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Fluoride	No	quarterly	0.65	ppm	0.56-0.70	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Total Trihalomethanes (TTHM)[3]	No	quarterly	50 Highest LRAA	ppb	20-60	80 LRAA		By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)[3]	No	quarterly	30 Highest LRAA	ppb	20-40	60 LRAA		By-product of drinking water chlorination
Total Coliform Bacteria (RTCR)	No	2024	0			TT - Trigger	0	Naturally present in the environment

(3) 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	2024	1.73	ppm	0.52-3.00	4.0	4.0	Water additive used to control microbes

MONITORED AT THE CUSTOMER'S FAUCET (Every Three Years)

Contaminant	Violation	Date Collected	Level Detected	Unit of Measure	Range	MCL	MCLG	Likely Sources of Contaminants
Copper[4]	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[4]	No	2023	≤ 1.0[5]	ppb	≤ 1.0[5]	AL=15	0	Corrosion of household plumbing systems, erosion of natural deposits

(4) Level detected is 90th percentile. During our most recent scheduled testing, out of 30 households sampled, 0 contained concentrations exceeding the action level (AL).*
(5) Lead is not present in an amount sufficient to be detected by the laboratory equipment.

*The Lead and Copper Rule (LCR) establishes criteria for monitoring and treatment of the public drinking water systems to protect public health. This rule establishes a treatment technique to address lead and copper levels. Because there is no safe level of lead in drinking water, an **Action Level** is established instead of an MCL, which if exceeded requires a public water system to take actions to reduce the corrosivity of water through treatments and other actions necessary to reduce lead exposure and keep the public drinking water safe.

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.