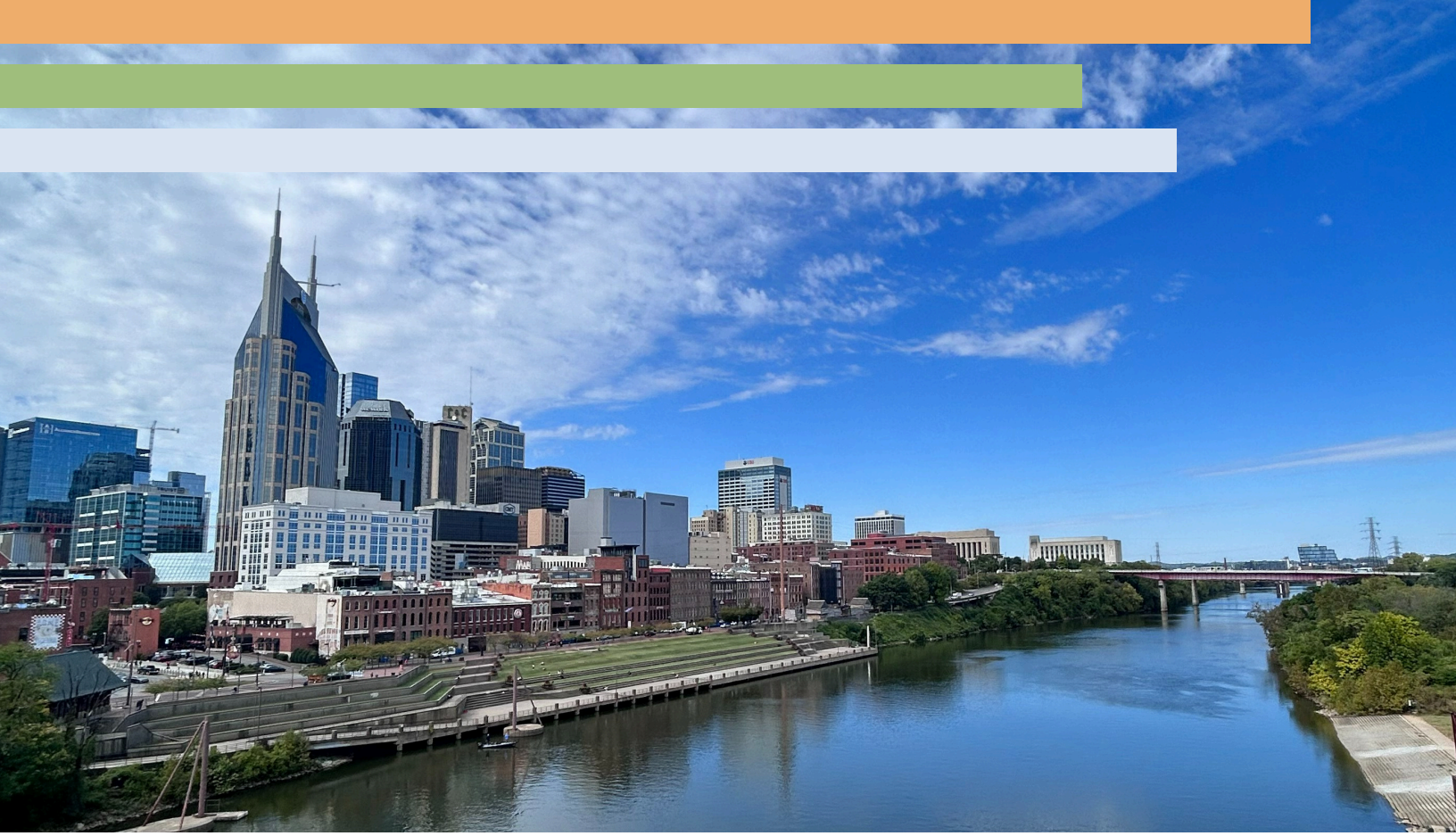


2024 Consumer Confidence Report

Metro Water Services is committed to delivering clean, safe, reliable drinking water.

This report details our water quality testing results for 2024. We go above and beyond to meet and exceed all state and federal regulations for drinking water.

INSIDE THIS REPORT

WHAT IS THE CONSUMER CONFIDENCE REPORT?

Metro Water Services (MWS) is regulated by the Environmental Protection Agency (EPA) under the Safe Drinking Water Act, which requires community water systems to provide all customers an annual report. This report includes information on our source water, our compliance with drinking water regulations, water quality testing results, and other educational information.

PLEASE SHARE THIS REPORT.

Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, or businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

ESTE INFORME CONTIENE INFORMACIÓN MUY IMPORTANTE SOBRE SU AGUA BEBER. TRADÚZCALO Ó HABLE CON ALGUIEN QUE LO ENTIENDA BIEN.

Throughout your water's journey--from the river to your home and back--MWS goes ***above and beyond*** to ensure the quality and reliability of our services.

« Look for the **Above and Beyond** icon throughout this report.

We understand that the safety of your drinking water is a matter of utmost importance, and we strive to earn your trust through clear and accessible information.

Dear Customers,

Metro Water Services places the highest value on providing our community with safe, high-quality drinking water. As Nashville and Middle Tennessee continue to grow as a place to visit, build new business, and to make as a home, our mission remains the same: to monitor and treat water for substances that could impact health, taste, odor, and appearance. Integral to this mission is our unwavering commitment to transparency and fostering the trust of the community we serve. We believe that open communication about our processes, challenges, and successes is paramount to ensuring confidence in the water you drink.

As a department of the Metropolitan Government of Nashville & Davidson County, we proudly provide safe, clean, and reliable water services to over 226,500 customers in Davidson County and parts of Rutherford and Williamson counties. Our highly educated and skilled team is dedicated to going above and beyond regulatory requirements, ensuring a quality product is delivered from the river, through our treatment processes, and across our extensive network of over 3,000 miles of water mains to your home.

We understand that the safety of your drinking water is a matter of utmost importance, and we strive to earn your trust through clear and accessible information. We are pleased to deliver the 2024 Consumer Confidence Report showing that your drinking water is safe. For more information about Metro Water Services and the quality of your drinking water, visit water.nashville.gov. We encourage you to explore this resource to gain a deeper understanding of our treatment processes and the rigorous testing we conduct to ensure your water is safe.

Sincerely,

Scott Potter, P.E., Director

ABOUT THE CUMBERLAND RIVER

The Cumberland River is formed on the Cumberland Plateau in KY and generally flows west almost 700 miles looping through Nashville on its way to the Ohio River.

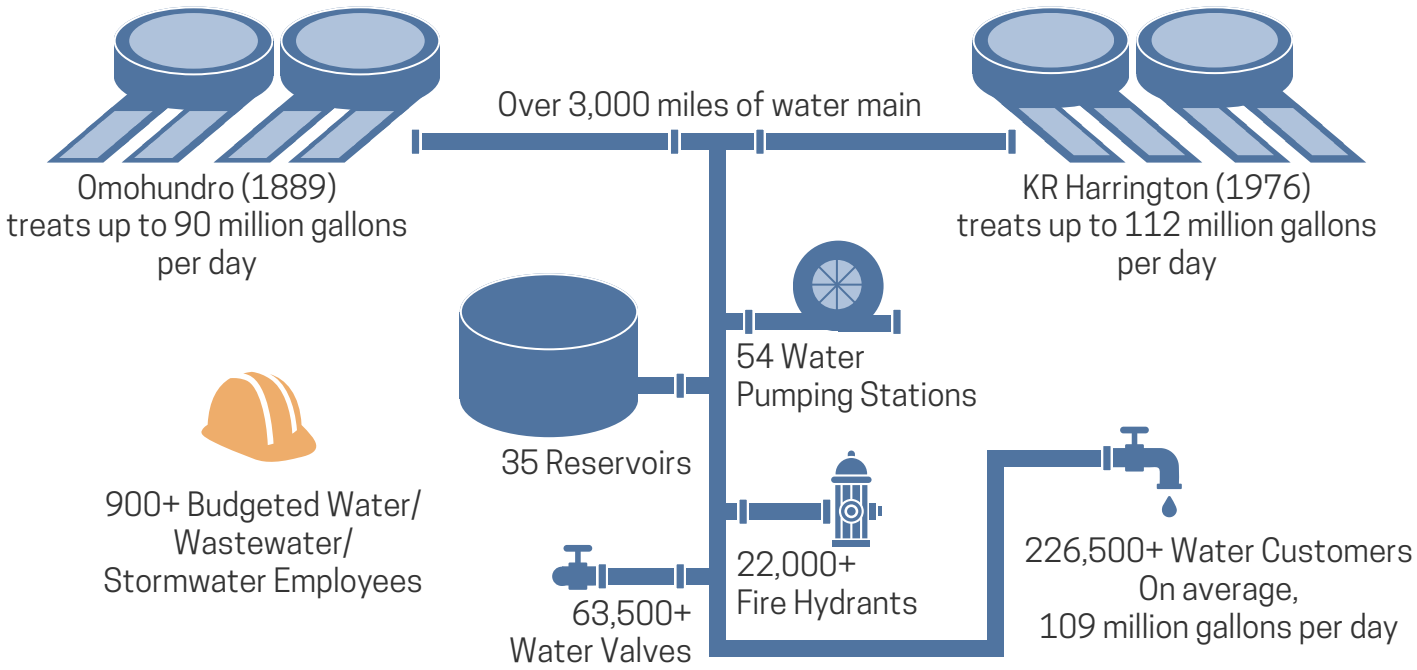
Nashville is fortunate to have the Cumberland River as its abundant supply of water.

The EPA has given the Cumberland River in Nashville a good grade for water quality. For more information, visit **mywaterway.epa.gov/community/37208/drinking-water**.

The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving this water system. A copy of the Water Assessment Report will be available for review at MWS' Administrative Library, located at 1600 Second Ave. North. A source water assessment summary is available at **www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html**.

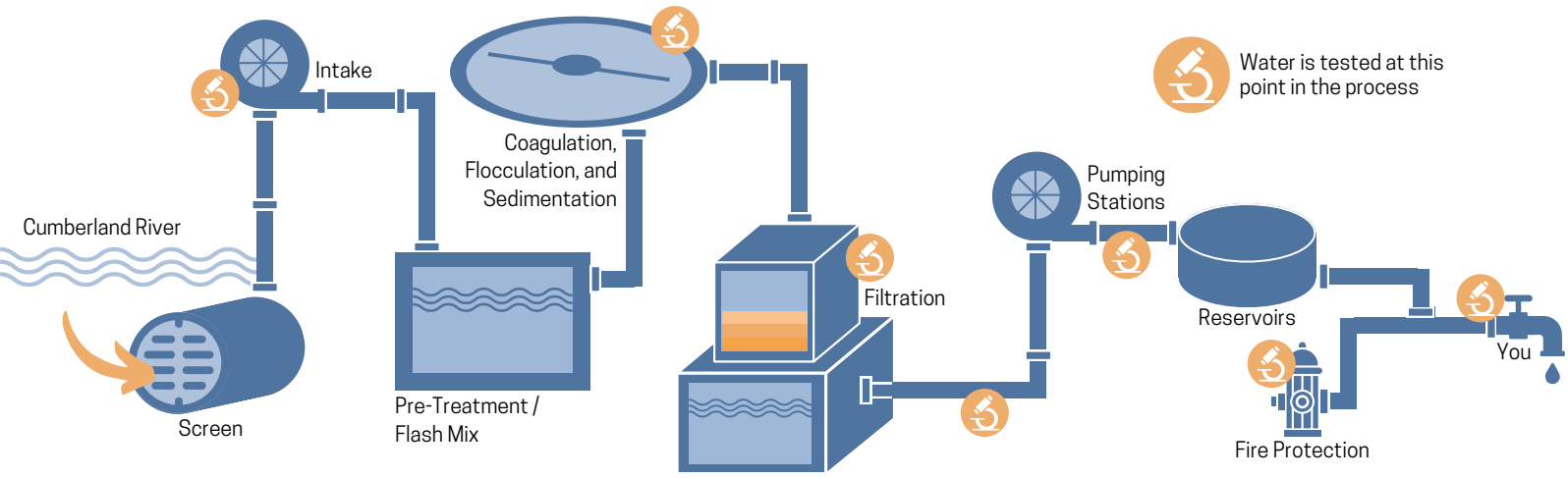
The Cumberland River Source is rated highly susceptible to potential contamination. MWS has two water treatment plants and has the ability to withdraw water from more than one river level to minimize the chance of contamination.

WATER TREATMENT INFRASTRUCTURE



WATER TREATMENT PROCESS

LOCAL TREATED FILTERED TESTED DELIVERED



LOCAL. Water is collected from the Cumberland River and screened for twigs and other large debris before entering one of our two treatment plants, K.R. Harrington and Omohundro.

TREATED. In the treatment plant we add alum, a chemical that makes the small particles of mud and algae stick together. These clumps of mud get larger until they are heavy enough to sink to the bottom of the tank. This is called coagulation, flocculation, and sedimentation.

FILTERED. The clear water on top of the tank is sent through our filters to remove any remaining particles, leaving the water crystal clear. We use a small amount of bleach to kill harmful bacteria and disinfect the water. We also add a small amount of fluoride, as endorsed by the Metro Health Department, to help prevent tooth decay.

TESTED. We test our water regularly before, during and after the treatment process to ensure that our customers receive clean, safe drinking water.

DELIVERED. We deliver clean, safe water to over 226,500 customers throughout Metropolitan Nashville and Davidson County. We maintain over 3,000 miles of water pipes, 54 water pumping stations, and 35 reservoirs. Our crews work 24/7/365 to make sure you always have safe water at your tap.

ABOVE AND BEYOND

MWS received 596 from a possible 599 points on the Sanitary Survey. (The 3 points lost were due to the violation discussed on page 7) The Sanitary Survey is a comprehensive 3-day inspection by Tennessee Department of Environment and Conservation that covers all aspects of drinking water operations.

OUTSTANDING PERFORMANCE

WATER QUALITY TESTING

MWS is required by state and federal regulations to test for specified unregulated organic and inorganic chemicals. This testing has been performed and reported. All results are available for public inspection at the Metro Water Services Analytical Research Laboratory, 1450 Lebanon Pike. For more information, please contact the MWS Lab at (615) 862-4591 or visit our website at **water.nashville.gov**.

WATER HARDNESS

Water hardness is created, for the most part, by dissolved Calcium. Hardness is naturally found in the Cumberland River water due to the high amounts of Limestone deposits in Tennessee and Eastern Kentucky. The water treatment process doesn't remove hardness so the Hardness of the Cumberland River is very similar to that of Finished Drinking Water. Hardness is expressed as mg/l, parts per million (ppm), grains per gallon, or by a word description of the relative hardness of the sample.

Ensuring proper water pressure, water age, reservoir turnover, and chlorine residual is essential to our community's health and quality of life.

Through advanced algorithms and machine learning, the Xylem Vue platform gives us the ability to create a network-wide digital twin that displays operating conditions, even in areas where there are no sensors – helping us to diagnose potential issues in the distribution system and optimize operations to ensure the highest water quality.

ABOVE AND BEYOND

COMING INTO VUE

Nashville's water is considered 'moderately hard'.

Hardness as mg/L or ppm	Hardness as grains per gallon (gr/gal)	Classification
Less than 15	Less than 1	*Very soft*
15 to 30	1 to 3	*Soft*
50 to 100	3 to 6	*Medium hard*
100 to 200	6 to 12	*Hard*
Greater than 200	Greater than 12	*Very hard*

mg/L (2023 data)	MWS	Range of Detection	MCL
Total Hardness	100.5 mg/L	88.5 - 128.4	Not established
Calcium Hardness	79.5 mg/L	67.1 - 102.6	Not established

A hardness of 17.1 mg/L (or ppm) = 1 grain per gallon

NOTICE OF VIOLATION

MWS recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During May and June of 2024, we "did not complete all monitoring or testing" for Total Coliform/E. coli/Free Residual Chlorine and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. All Total Coliform/E. coli/Free Residual Chlorine samples taken in May and June, as well as the 240 monthly samples taken since, indicate that the water quality is within Safe Drinking Water parameters. Your drinking water meets all of the state and federal requirements.

The table below lists the contaminant we did not properly test for, how many samples we are supposed to take, how many samples we took, and actions taken following the violation.

Important Information About Your Drinking Water 2024 Occurrences of Monitoring Requirements Not Met, Resulting in Violation of the Revised Total Coliform Rule				
Contaminant	Required Number of Valid Samples/Frequency	Number of Valid Samples Taken	When all Valid Samples Should Have Been Taken	When Valid Samples Will Be Taken
Total Coliform / *E. Coli*	240 samples monthly May 2024	228	240 by end of May 2024	240 by the end of July 2024 and each month thereafter
Total Coliform / *E. coli*	240 samples monthly June 2024	231	240 by end of June 2024	240 by the end of July 2024 and each month thereafter

CORRECTIVE ACTION TAKEN

The monthly sample count protocol has been modified to differentiate between the required ***routine*** samples and follow-up samples. Additionally, the distribution sampling plan has been updated to reflect that only ***routine*** samples are counted toward the compliance number of 240 samples/month.

Additionally, Sample Record logs are double-checked before the end of the month to ensure enough samples have been taken and data is uploaded before the end of the month into the EPA database to ensure that the required number of samples are acceptable.

EVERY DAY, SEVEN DAYS A WEEK, SAMPLES OF RIVER, TREATED, AND FINISHED WATER ARE TESTED IN OUR STATE OF THE ART LABORATORY TO ENSURE THE HIGHEST QUALITY FOR OUR CUSTOMERS.

2024 WATER QUALITY DATA

MWS tests for 105 substances that may be present in drinking water. The table below shows those substances that were detected January 1 through December 31, 2024. If you would like a complete list of all substances for which we test, please call (615) 862-4494 to request a Water Quality Letter, or visit our website at **water.nashville.gov**.

REGULATED AT THE WATER TREATMENT PLANT

Parameter & Units of Measure	Highest Avg. Level Detected	Range of Levels Detected	MCL	MCLG	Major Sources of Substance
Fluoride (ppm)	0.68	0.61-0.75	4	4	Water additive that promotes strong teeth
Nitrate (ppm)	0.180	0.126-0.249	10	10	Runoff from fertilizer use
Sodium (ppm)	9.97	7.80-11.3	N/A	N/A	Natural deposit erosion
Turbidity (NTU)	99.5%	0.01-0.70		TT = 1 NTU -- TT = % of samples < 0.3 NTU	Natural river sediment. Turbidity is a measurement of water clarity, which aids in determining the effectiveness of our filters

REGULATED IN THE DISTRIBUTION SYSTEM

E. Coli	0**	N/A	0	0	Human and animal fecal waste
Total Trihalomethanes (THM) (ppb)	44.8*	14.2-65.3	80	N/A	Disinfection chemical (chlorine) combining with organic matter in the river water
Total Haloacetic Acids (HAA) (ppb)	28.7*	11.5-35.8	60	N/A	
Chlorine (ppm)	1.70	0.8-2.7	MRDL 4	MRDLG 4	Water additive used to control microbes

REGULATED AT THE CUSTOMERS' TAP

Parameter	90th Percentile	Sites Exceeding AL	Ranges of Levels Detected	MCL	MCLG	Major Sources of Substance
Copper (2022 analyses) (ppm)	0.119	0 of 52	< 0.0001 - 0.326	AL = 1.30	1.30	Corrosion of household plumbing systems
Lead (2022 analyses) (ppb)	1.0	0 of 52	< 0.10 - 3.5	AL = 15.0	0.00	

* Sampling conducted within the water distribution system at various State approved locations. Results shown are the Highest Locational Running Annual Average (LRAA), calculated quarterly for all samples taken

** Number of Samples Resulting in "Presence" detection.

ABBREVIATIONS AND TERMS USED IN THIS REPORT

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.

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.

TT (TREATMENT TECHNIQUE): A required process intended to reduce the level of a contaminant in drinking water.

ppm: Parts per million or milligrams per liter (mg/L).

ppb: Parts per billion or micrograms per liter (µg/L).

AL (ACTION LEVEL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

NTU (NEPHELOMETRIC TURBIDITY UNITS): Standard units for measurement of water clarity.

MRDL (MAXIMUM RESIDUAL DISINFECTANT LEVEL): The highest level of a disinfectant allowed in drinking water.

MRDLG (MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL): The level of a drinking water disinfectant below which there is no known or expected risk to health.

What is a ppm?
One part per million (ppm) is 1 unit per every 1,000,000 or 1/1,000,000. You can think of it as one second in 11.5 days or one single penny in $10,000.

ppb?
One part per billion (ppb) is 1 unit per every 1,000,000,000 or 1/1,000,000,000. You can think of it as one second in 31.5 years or one single drop of water in a 10,000 gallon swimming pool.

SAFE DISPOSAL OF PHARMACEUTICAL PRODUCTS

As analytical methods improve, pharmaceutical compounds and personal care products are being found at very low levels in many of our nation's lakes, rivers and streams. To date, research throughout the world has not demonstrated an impact on human health from pharmaceuticals in drinking water. Knowing how to properly dispose of unused or expired medication can help protect you and the environment.

Medication collection events and programs are part of a nationwide effort to reduce the amount of pharmaceutical products being flushed or poured down drains and landfilled. There are over 340 take back bins located across the state in all 95 counties. To find a convenient location to you, please visit: **tdeconline.tn.gov/rxtakeback**.

In Nashville, you can safely dispose of unwanted drugs at any of the Metro Nashville Police locations listed here: **www.nashville.gov/departments/police/support-services/evidence-storage/safely-dispose-unwanted-drugs**. These drop boxes accept prescriptions, over the counter medications, pet medications, medicated ointment, lotions or drops, liquid medications, inhalers, and pills in any packaging.

ABOVE AND BEYOND

OUT WITH THE OLD, IN WITH THE NEW

The 18 filters at K.R. Harrington began showing signs of their age and a filter condition assessment was done by Carollo Engineers in 2021. This assessment led to a project that rehabilitated and modernized all 18 filters, with the goal of less operation and maintenance attention. The new filters utilize a nozzle-based monolithic underdrain provided by Orthos Liquid Systems – a concrete tile floor with sleeves cast into the concrete and filter nozzles designed to meet our filter specifications installed on the sleeves. This design allows us to alter the filter nozzles to maintain compatibility with any new filter media designs that may be desired in the future. The project resulted in longer filter runs (time between filter backwashing/cleaning) and the ability to treat additional water. Capacity at K.R. Harrington has now increased from 90 MGD to 112 MGD.

A MESSAGE FOR VULNERABLE POPULATIONS

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain impurities 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.

The sources of drinking water (both tap water and bottled water) include lakes, streams, ponds, reservoirs, springs, wells, and, in Nashville's case, the Cumberland River. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

Some people may be more vulnerable to impurities in drinking water than the general population. Immuno-compromised persons such as cancer patients undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at-risk for infection. These people should seek advice from their health care providers about drinking water.

Impurities that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, sewage treatment plants, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm run-off, 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, storm water run-off and residential uses.
- Organic chemicals, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

NEW PFAS REGULATIONS

On April 10, 2024, the Environmental Protection Agency (EPA) issued the first-ever national drinking water standards for six Per- and Polyfluoroalkyl substances (PFAS). The final rule establishes maximum contaminant levels goals (MCLGs) and maximum contaminant levels (MCLs) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), and a hazard index level for Perfluorohexanesulfonic acid (PFHxS), Perfluorononanoic acid (PFNA), Perfluorobutanesulfonic acid (PFBS), GenX Chemicals (HFPO-DA).

MWS began voluntarily testing for PFAS as early as 2015 and has tested every three years since. Tests on drinking water leaving our treatment plants conducted in 2015, 2019, 2021 and again in 2023 found no reportable levels of PFAS. Our latest testing was done in November 2023 and results of that analysis were non- detect.

For more information about PFAS, visit our website at **www.nashville.gov/departments/water/water-quality/pfas**.

PREVENTING LEAD IN DRINKING WATER

Nashville's drinking water does not contain lead when it leaves the treatment plants, but tap water can accumulate trace amounts of lead through the corrosion of lead plumbing materials. Lead pipes and service lines were common in homes until the mid-1950s.

WHERE IS LEAD FOUND IN THE HOME?

Homes built prior to 1978 often contain lead-based paint. When lead paint fails, it can chip or create dust, which can then be ingested. Lead paint is the most common source of lead exposure in children. Lead pipes and service lines were common in homes until the mid-1950s. The practice was federally banned in 1986, but lead was still used as a soldering material for copper pipe until 1988. Brass fixtures may also contain trace amounts of lead.

HOW DOES LEAD ENTER MY DRINKING WATER?

Nashville's drinking water does not contain lead when it leaves the treatment plants, but tap water can accumulate trace amounts of lead through the corrosion of lead plumbing materials. MWS regularly tests for lead in the drinking water at a selected number of lead service line locations. The EPA requires tested levels be below 15 parts per billion (ppb).

CONTROLLING CORROSION

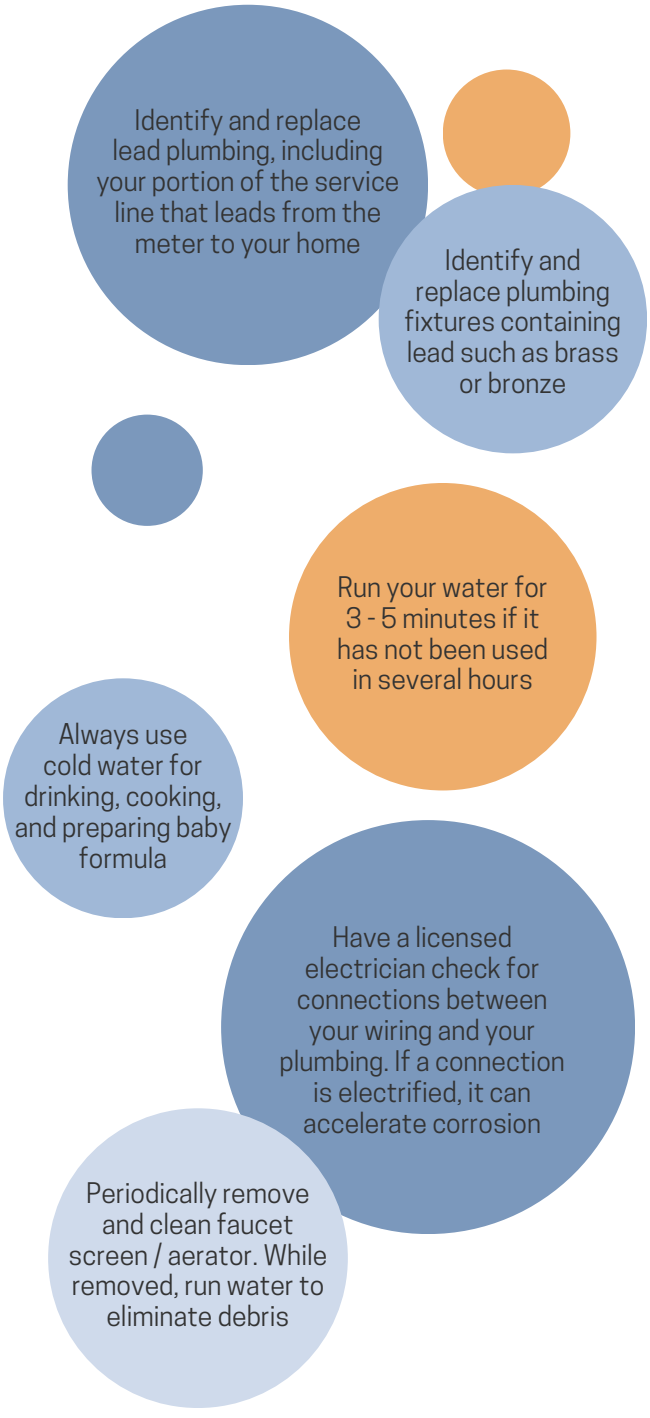
Since 1987, MWS has had an intense corrosion control program to prevent the possibility of lead leaching into your water. A blended phosphate solution is added to the finished water and reacts to inhibit corrosion of water mains; tie-up nuisance metals; and remove scale deposits in pipes by bonding to the walls and forming a protective barrier.

HOW DO I KNOW IF I HAVE LEAD PLUMBING?

Identify the color of your pipes, lead is generally a dull gray. Carefully scratch the pipe with a key. If the pipe is made of lead, the area you've scratched will turn a bright silver color. Do not use a knife or other sharp instrument and take care not to cut or puncture a hole in the pipe.

WHAT ARE THE RISKS OF 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.



Boiling water will NOT reduce lead

For more information about lead, visit our website and download our "Preventing Lead In Drinking Water" brochure at **nashville.gov/departments/water/water-quality/lead**.

PREVENTING LEAD IN DRINKING WATER

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. Metro Water Services 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, 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 Metro Water Services at 615.862.4923. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at ***www.epa.gov/safewater/lead***.

LEAD SERVICE LINE INVENTORY

Metro Water Services has collected material data for the public (water main to meter) and private (water meter to residence/building) portion of water service lines for the EPA required service line inventory. Compilation of this data included reviewing old records dating back to 1904 as well as new construction records, use of a metal analyzer, and customer reported service line surveys.

The service line inventory is available in this interactive map: **experience.arcgis.com/experience/d391788f09a44f9ba8f53f444596a5b4**. Please note that the materials shown are to the best of Metro Water Services knowledge.

If your address shows unknown, please take this service line inventory survey to help us document the material of your service line: **arcg.is/1a0SCr**.

Need guidance? Visit **bit.ly/MWSPIPE** and watch the video under Inform to help you locate your service line and determine the pipe material.

PIPE

PREVENT.INFORM.PROTECT.ELIMINATE.

Keeping Nashville Safe from Lead Pipes

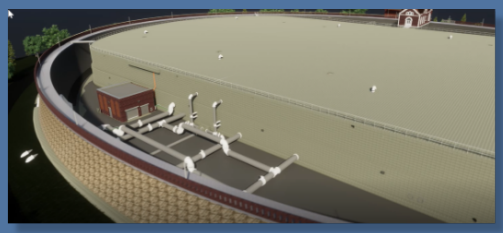
ABOVE AND BEYOND

The Omohundro South Campus solar field marks our most ambitious solar installation to date, with a design capacity of 2.6 megawatts of clean, renewable energy. With over 5,800 solar panels, it can produce enough energy to offset the consumption of approximately 324 homes based on the Environmental Protection Agency's average home use per year (2023 data).

A BEACON OF SUSTAINABILITY

LOOKING TO THE FUTURE

HISTORIC 8TH AVENUE RESERVOIR



Approximately 10 years ago, discussions began regarding the future of the historic 8th Ave Reservoir and designs for historic restoration began.

The 8th Avenue Reservoir Improvements Project began the summer of 2021 to extend the life of a vital component of our water infrastructure. By installing cast in place concrete tanks with baffling within the existing structure, MWS is improving water quality, increasing operational reliability and flexibility, and reducing the risk of slippage and leakage. Construction of Phase 1, a new 15-million-gallon concrete tank in the west basin of the reservoir was completed in August 2023. Upon completion of the west basin, the east basin was drained, and the original 8th Ave reservoir was cut and capped and permanently disconnected from the system. Construction of Phase 2, a 20-million-gallon concrete tank on the east side has begun. Phase 3 to be done at a later date will include a new tower structure to access the reservoir and additional historic renovations. Find out more about this project: **historic8thavenuereservoir.com**

PROCESS ADVANCEMENTS

MWS has always delivered safe, clean, and reliable water to our customers and we strive to stay informed of new technologies and ahead of new regulations. To continually explore emerging technologies to best provide safe and reliable drinking water to our customers now and in the future, MWS executed a 2-year pilot plant treatment study in 2018 to determine the best future treatment system for the department's source water.

Based on results of the pilot study, MWS has begun a 10-year Process Advancements Project that will allow us to proactively address aging infrastructure, expand capacity, reduce flood risk, and incorporate the use of new treatment technologies for enhanced water quality at our water treatment facilities, preparing them for the next generation. Find out more about the process advancements: **AdvancingMWSWater.org**

QUESTIONS

For questions about billing, to start or change water service, or if you have a water, sewer, or stormwater emergency, contact Metro Water Services at (615) 862-4600.

If you have questions about this report, contact Sonia Allman at (615) 862-4494 or MWSCommunications@groups.nashville.gov.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

HOW YOU CAN BE INVOLVED

The public may participate in decisions concerning water quality by attending the Metropolitan Council meetings held on the first and third Tuesdays of each month at the Metro Courthouse, One Public Square.

ADA INFORMATION

If you need assistance or an accommodation, please contact the Safety Office at 1600 Second Ave. North, Nashville, TN 37208 or call (615) 862-4862.

METRO WATER SERVICES

WATER.NASHVILLE.GOV

@NashvilleMWS