

2026 WATER QUALITY REPORT UTILITIES BOARD OF MUSCLE SHOALS

OVERVIEW

The Muscle Shoals Utilities Board is pleased to provide you with this year's Water Quality Report for 2026. This report is designed to keep you informed about the quality of water and the services we deliver to you every day. We want you to understand the efforts we are making to improve treatment processes and protect our supply. We are committed to providing our customers with the safest and highest quality drinking water possible. This Water Quality Report is required by the Safe Drinking Water Act and tells you where your water comes from, what tests by independent laboratories show about it, and other information you should know about your drinking water.

The Muscle Shoals Utilities Board Water Treatment Plant is located at 321 River Road and utilizes Wilson Lake on the Tennessee River for its drinking water source. The treatment plant incorporates a process of mixing, flocculation, sedimentation, and filtration in the treatment process. Also, chlorine dioxide & chlorine are used for disinfection, fluoride for dental protection, caustic soda for pH adjustment and a phosphate corrosion inhibitor. The Utilities Board has also performed a source water assessment for the water treatment plant. This information may be viewed at the Utilities Board office between the hours of 7:00 a.m. and 3:30 p.m., Monday through Friday. Appointments for reviewing are required.

Five (5) Board Members govern the Utilities Board. Current Board members are Mr. Waylon Huguley – Vice Chair, Mr. Tyrus Mansell, Mrs. Donna Ricks – Chair, Mr. Keith Murphy, and Mr. Joe Underwood.

If you have any questions about this report or concerning your water utility, please contact Mr. James Vance, Manager at 256-386-9260 or Mr. Brian Barton, Water Plant Supervisor at 256-386-9263. We want our valued customers to be informed about their water utility. If you want to learn more, please consult our website at www.muscleshoalswater.org or attend any of our regularly scheduled Board meetings. They are held at 5:00 p.m. on the third Thursday of every month at the Utilities Board Office at 2001 Wildwood.

FROM THE MANAGERS DESK...

The Muscle Shoals Utilities Board is pleased to share with you our 2026 Water Quality Report. On March 14, 2023, the EPA announced the proposed National Primary Drinking Water Regulation (NPDWR) to establish legally enforceable levels for six PFAS in drinking water. On April 10, 2024, the EPA finalized its proposed NPDWR and announced its expectation that "over many years the final rule will prevent PFAS exposure in drinking water for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious PFAS-attributable illnesses."

The EPA's new regulation provides a window of up to five years for public water systems to reach full compliance. MSUB has already taken action to remove these contaminants from your water. MSUB has been monitoring PFAS, notifying the public of the levels of these PFAS, and undertaking efforts to evaluate how best to reduce the levels of these PFAS in drinking water. Due to the unique chemical properties of PFAS, conventional water treatment plants are incapable of fully removing PFAS from drinking water.

As a result, MSUB is evaluating state-of-the-art water filtration systems to reduce PFAS to non-detectable levels. MSUB has completed a pilot program study of various PFAS treatment technologies and is currently working with our engineers to select the best method of removing PFAS from our water supply. In the interim, MSUB has installed Granular Activated Carbon (GAC) in existing filters at our water plant as a temporary and emergency measure to reduce PFAS from the drinking water supply while permanent and long-term PFAS filtration improvements are evaluated, designed, and implemented.

MSUB does not believe that the past, present and future capital costs and increased operational expenses associated with removing PFAS from our water supply should be the responsibility of our ratepayers. For that reason, we engaged and retained outside legal counsel with extensive experience in PFAS litigation to evaluate and litigate claims against those responsible for the PFAS chemicals in our water supply. MSUB filed suit in the Circuit Court of Colbert County, Alabama in February of 2023 and while we cannot comment on pending litigation, our lawsuit against PFAS chemical manufacturers and others responsible for the PFAS contamination is moving forward in the Circuit Court of Colbert County, Alabama. It remains our goal to hold those that contaminated our water supply with PFAS responsible for all past, present, and future costs associated with removing their PFAS contamination from our drinking water.

More information regarding PFAS can be found on our website at www.muscleshoalswater.org.

Thank you for the opportunity to share this report with you.

James Vance, Manager

◆ COMMUNITY AWARENESS NOTICE ◆

- **Any unauthorized use and/or tampering with Treatment or Storage Facilities and Fire Hydrants is a FEDERAL OFFENSE! If you suspect or are aware of possible illegal activities around these areas, please contact us immediately at 256-386-9260.**
- **For any water or sewer EMERGENCIES, call 256-386-9260, answered 24 hours/7-days per week.**
- **For more information, please check our website at www.muscleshoalswater.org.**

The Muscle Shoals Utilities Board monitors contaminants according to a schedule assigned to us by the Alabama Department of Environmental Management (ADEM), using EPA approved methods and a state certified laboratory. The Alabama Department of Environmental Management (ADEM) allows us to monitor some contaminants less than once per year because the concentration of these contaminants does not change frequently.

Constituent Monitored	Date Monitored
Inorganic Contaminants	2025
Microbiological Contaminants	current
Lead and Copper	2025
Nitrates	2025
Radiological Contaminants	2021
Synthetic Organic Contaminants	2025
Volatile Organic Contaminants	2024
Disinfection By-products – Stage II	2025
Cryptosporidium	2025
Per and Polyfluoroalkyl Substances (PFAS)	2025
Unregulated Contaminants Monitoring Rule Contaminants (UCMR5)	2025

The following table is a list of **Primary Drinking Water Contaminants** and **Unregulated Contaminants** for which our water system routinely monitors according to our regulatory schedule. These contaminants were **not** detected in your drinking water unless they are listed in the **Table of Detected Drinking Water Contaminants**.

REGULATED PRIMARY DRINKING WATER CONTAMINANTS (The MCL for each Contaminant is Listed)			
Bacteriological	Cyanide – 200 ppb	1,2-Dichloroethane – 5 ppb	Methoxychlor – 40 ppb
Total Coliform Bacteria - <5%	Fluoride – 4 ppm	1,1-Dichloroethylene – 7 ppb	Oxamyl [Vydate] – 200 ppb
Fecal Coliform and E. coli - 0	Lead – AL = 15 ppb	cis-1,2-Dichloroethylene – 70 ppb	Polychlorinated biphenyls-500 ppt
Fecal Indicators - TT	Mercury – 2 ppb	trans-1,2-Dichloroethylene-100 ppb	Pentachlorophenol – 1 ppb
Turbidity - TT	Nitrate – 10 ppm	Dichloromethane – 5 ppb	Picloram – 500 ppb
Radiological	Nitrite – 1 ppm	1,2-Dichloropropane – 5 ppb	Simazine -4 ppb
Beta/photon emitters – 4 mrem/yr	Total Nitrate and Nitrite – 10 ppm	Di (2-ethylhexyl)adipate – 400 ppb	Styrene -100 ppb
Alpha emitters – 15 pCi/l	Selenium – 50 ppb	Di (2-ethylhexyl)phthalate – 6 ppb	Tetrachloroethylene – 5 ppb
Combined radium – 5 pCi/l	Thallium – 2 ppb	Dinoseb – 7 ppb	Toluene – 1 ppm
Uranium – 30 ppb	Organic Contaminants	Dioxin [2,3,7,8-TCDD] – 30 ppq	TOC (Total Organic Carbon)-TT
Inorganic Chemicals	Acrylamide – TT	Diquat – 20 ppb	TTHM[Total Trihalomethanes]80ppb
Antimony – 6 ppb	Alachlor – 2 ppb	Endothall – 100 ppb	Toxaphene – 3 ppb
Arsenic – 10 ppb	Atrazine – 3 ppb	Endrin – 2 ppb	2,4,5-TP(Silvex) – 50 ppb
Asbestos – 7 MFL	Benzene 5 ppb	Epichlorohydrin - TT	1,2,4-Trichlorobenzene – 70 ppb
Barium -2 ppm	Benzo(a)pyrene [PAHs] – 200 ppt	Ethylbenzene – 700 ppb	1,1,1-Trichloroethane – 200 ppb
Beryllium – 4 ppb	Carbofuran – 40 ppb	Ethylene dibromide – 50 ppt	1,1,2-Trichloroethane – 5 ppb
Bromate – 10 ppb	Carbon tetrachloride – 5 ppb	Glyphosate – 700 ppb	Trichloroethylene – 5 ppb
Cadmium – 5 ppb	Chlordane – 2 ppb	HAAS [Haloacetic Acids] – 60 ppb	Vinyl Chloride – 2 ppb
Chloramines – 4 ppm	Chlorobenzene – 100 ppb	Heptachlor – 400 ppt	Xylenes – 10 ppm
Chlorine – 4 ppm	2,4-D – 70 ppb	Heptachlor epoxide – 200 ppt	
Chlorine Dioxide – 800 ppb	Dalapon – 200 ppb	Hexachlorobenzene – 1 ppb	
Chlorite – 1 ppm	Dibromochloropropane – 200 ppt	Hexachlorocyclopentadiene-50 ppb	
Chromium – 100 ppb	o-Dichlorobenzene -600 ppb	Lindane – 200 ppt	
Copper – AL = 1.3 ppm	p-Dichlorobenzene -75 ppb	1,1-Dichloroethylene – 7 ppb	
UNREGULATED CONTAMINANTS			
1,1 – Dichloropropene	Aldicarb	Chloroform	Metolachlor
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Metribuzin
1,1,1,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	N - Butylbenzene
1,1-Dichloroethane	Aldrin	Dibromomethane	Naphthalene
1,2,3 - Trichlorobenzene	Bromobenzene	Dicamba	N-Propylbenzene
1,2,3 - Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	O-Chlorotoluene
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene
1,3 – Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene
1,3 – Dichloropropene	Bromomethane	Isopropylbenzene	Propachlor
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorofluoromethane

REQUIRED ADDITIONAL HEALTH INFORMATION

- All Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the 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 (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 radioactive material, and it can pick up substances resulting from the presence of animals or from human activities.
- To ensure that tap water is safe to drink, EPA prescribes regulations that limit the number of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.
- Testing for the presence of Cryptosporidium in our source water was conducted. Cryptosporidium was not detected.
- Contaminants that may be present in source water include the following: Microbiological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban 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 agricultural, storm water run-off, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water run-off, and septic systems. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).
- Based on a study conducted by ADEM with the approval of the EPA, a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.
- 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. The Utilities Board is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your drinking water has been sitting for several hours, you can minimize the potential effects for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your 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>.
- Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have diseases 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.
- The Muscle Shoals Utilities Board has completed its most recent round of lead and copper sampling. Representative samples, as approved by the Alabama Department of Environmental Management (ADEM), were collected from thirty participating customers. The results of the sampling are available on our website at www.muscleshoalswater.org or at our office located at 2001 Wildwood, Muscle Shoals, AL 35661, 7 am – 3:30 pm. Appointments for viewing are required.
- The Muscle Shoals Utilities Board is required to sample drinking water for lead in schools and licensed childcare facilities, as requested by the school and/or facility. Please contact your school or licensed childcare facility for more information about potential sample results.
- The Muscle Shoals Utilities Board has completed an inventory of all service lines in our distribution system. This inventory includes both the water system-owned and customer-owned portions of the service line. You can access the publicly available service line inventory at our offices located at 2001 Wildwood, Muscle Shoals, AL 35661, 7 am – 3:30 pm. Appointments for viewing are required.
- The Muscle Shoals Utilities Board maintains optimal corrosion control by adding a phosphate corrosion control inhibitor to reduce the corrosivity of the water to protect our consumers, based upon EPA and ADEM guidance.

Table of Detected Primary Contaminants – 2025 Data							
This table lists the contaminants detected in your water and the probable source of the contaminants.							
CONTAMINANT	MCLG	MCL	Range		Amount Detected	Likely Source of Contamination	
Bacteriological (Jan. - Dec. 2025)							
Turbidity	n/a	TT	-	-	0.59	NTU	Soil runoff
Inorganic Chemicals (Jan. - Dec. 2025)							
Fluoride	4	4	-	-	0.75	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Barium	2	2	-	-	0.0195	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper, 90 th percentile	1.3	AL = 1.3	0.0007	0.133	0.059	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead, 90 th percentile	0	AL = 15	ND	8.29	ND	ppb	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Nitrite	1	1	-	-	0.151	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate	10	10	-	-	0.544	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	50	50	-	-	0.604	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Disinfectants (Jan. - Dec. 2025)							
Chlorine	4	4	1.69	2.40	1.9	ppm	Water additive used to control microbes
Chlorine Dioxide	800	800	20	790	790	ppb	Water additive used to control microbes
Disinfection By-Products (Jan. - Dec. 2025)							
Chlorite	0.8	1	0.02	.098	0.98	ppm	By-product of drinking water disinfection
HAA5 – Stage II	n/a	60	7.6	52.2	29.6	ppb	By-product of drinking water disinfection
TTHM – Stage II	n/a	80	9.6	58.0	32.6	ppb	By-product of drinking water disinfection
Organic Chemicals (Jan. - Dec. 2025)							
TOC	n/a	TT	1.0	1.87	1.31	ppm	Naturally present in the environment
Radiological (Jan. - Dec. 2021)							
Combined Radium	0	5	-	-	0.0308	pCi/l	Erosion of natural deposits
Gross Alpha	0	15	-	-	0.409	pCi/l	Erosion of natural deposits
Table of Detected Secondary Contaminants - 2025 Data							
This table lists contaminants that may cause cosmetic or aesthetic effects in drinking water.							
CONTAMINANT	MCL		Units			Amount Detected	
Alkalinity	-		ppm			60	
Calcium	-		ppm			22.9	
Carbon Dioxide	-		ppm			1.76	
Chloride	250		ppm			12	
Hardness	-		ppm			68	
Magnesium	-		ppm			4.84	
Odor	-		Threshold Odor Number			1.00	
pH	-		S.U.			7.4	
Sulfate	500		ppm			16.4	
Sodium	-		ppm			8.9	
Specific Conductance	-		umhos/cm			203	
Total Dissolved Solids	500		ppm			31	
Aluminum	-		ppm			0.0193	
Per and Polyfluoroalkyl Substances – 2025 Data							
CONTAMINANT	Units		Amount Detected				
PFOS	ppt		17.0				
PFHxA	ppt		3.5				
PFHxS	ppt		2.3				
PFOA	ppt		9.8				
PFBS	ppt		4.9				
PFHpA	ppt		2.4				
Unregulated Contaminant Monitoring Rule 5 (UCMR5) – 2025 Data							
CONTAMINANT	Units		Amount Detected				
PFBA	ppt		5.0				
PFHxA	ppt		4.2				
PFOA	ppt		9.6				
PFBS	ppt		5.1				
PFOS	ppt		16.0				

To help you better understand the terms used in the following table, we have provided the following definitions:

- **ppm, mg/L (parts per million)** - one part per million corresponds to a single penny in \$10,000.
- **ppb, ug/L (parts per billion)** - one part per billion corresponds to a single penny in \$10,000,000.
- **ppt (parts per trillion)** – one part per trillion corresponds to a single penny in \$10,000,000,000.
- **ppq (parts per quadrillion)** – one part per quadrillion corresponds to a single penny in \$10,000,000,000,000.
- **MFL – million fibers per liter**
- **mrem/yr -Millirems per year (mrem/yr)** is the amount of radiation absorbed by the body.
- **pCi/l – Picocuries per liter (a measure of radioactivity)**
- **NTU (Nephelometric Turbidity Unit)** - nephelometric turbidity unit is the measure of the clarity of water.
- **SU= Standard Units**
- **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.
- **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.
- **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.
- **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 control of microbial contaminants.
- **ND -No Detection**
- **AL (Action Level)** - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.
- **TT (Treatment Technique)** - A required process intended to reduce the level of a contaminant in drinking water.
- **Variations and Exemptions** – ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.