

# Annual Drinking Water Quality Report January—December 2023

Munford Water Authority, Inc.  
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Munford, AL 36268

MCL's are set at very stringent levels. 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 level for a lifetime to have a one-in-a-million chance of having the described health effect.

### A MESSAGE FROM THE BOARD

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you

for understanding. We at The Munford Water Authority, Inc. works around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Consumer Confidence Report Prepared By The Alabama Rural Water Association

### General Information

As you can see by the tables, our system had no monitoring violations of allowable limits of contaminants in drinking water. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. **Total Coliform:** The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

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 activity. 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).

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. **Munford Water Authority, Inc.** is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential 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 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>.

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and the Alabama Department of Environmental Management (ADEM) drinking water health standards. Your Local Water officials vigilantly safeguard its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standards.

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

The majority of your water comes from our Carter Street well, which produces 150 gallons per minute and our new Stephens Street well at 550 gallons per minute. The Knox Aquifer is the source for both wells. Oxford Water is from the Knox Group, Shady Dolomite Aquifer. We are both required to add chlorine for disinfecting. Both Munford and Oxford have provided water testing data.

### BOARD OF DIRECTORS & Staff

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- Andrew S. Collett – General Manager*
- Dina V. Bazor – Administrative Assistant*
- Erika H. Brown-Office Clerk*
- Jacob T. Adams-Grade II Operator*
- Jared C. Gable-Maintenance/Trainee*

Munford Water Authority, Inc.

### Important Drinking Water Definitions:

- Disinfection Byproducts** – contaminants formed when chlorine is used as a disinfectant.
- Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.
- Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- Parts per billion (ppb) or Micrograms per liter** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- Parts per trillion (ppt) or Nanograms per liter (nanograms/l)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- Parts per quadrillion (ppq) or Picograms per liter (picograms/l)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.
- Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Variances & Exemptions** - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- Maximum Contaminant Level Goal or MCLG** - 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.
- Maximum Contaminant Level or MCL** - 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.
- Maximum Residual Disinfectant Level Goal or MRDLG** - 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.
- Maximum Residual Disinfectant Level or MRDL** - 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.
- Variances and Exemptions** - The Department or EPA permission not to meet an MCL or a treatment technique under certain conditions
- Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.

**The Munford Water Authority, Inc. routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2023. All 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 (800-426-4791).**

The Munford Water Authority, Inc. utilizes a Bacteriological Monitoring Plan, and a Cross Connection Policy is in place to insure good safe drinking water for our customers. The Munford Water Authority, Inc. has completed a Source Water Assessment Plan which is available for review at their office. A Source Water Assessment Plan provides information about potential sources of contamination and is set up to help protect our source.

**Any Questions?**  
Please attend our regularly scheduled meetings for 2024!  
**January 18, March 21, May 16, July 18, September 19, November 21. All meetings are held at 6:30 pm in the MWA office.**

## Table of Primary Contaminants

At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	Munford	Oxford	CONTAMINANT	MCL	Munford	Oxford	CONTAMINANT	MCL	Munford	Oxford
<b>Bacteriological</b>											
Total Coliform Bacteria	< 5%	ND	ND	Selenium(ppb)	50	ND	ND	Epichlorohydrin	TT	ND	ND
Turbidity	TT	ND	0.08	Thallium(ppb)	2	ND	ND	Ethylbenzene(ppb)	700	ND	ND
Fecal Coliform & E. coli	0	ND	ND	<b>Organic Chemicals</b>			Ethylene dibromide(ppb)	50	ND	ND	
<b>Radiological</b>											
Beta photon emitters (mrem/yr)	4	ND	ND	Acrylamide	TT	ND	ND	Glyphosate(ppb)	700	ND	ND
Alpha emitters (pci/l)	15	ND	ND	Alachlor(ppb)	2	ND	ND	Haloacetic Acids(ppb)	60	ND	18.00
Combined radium (pci/l)	5	ND	ND	Atrazine(ppb)	3	ND	ND	Heptachlor(ppb)	400	ND	ND
Uranium(pci/l)	30	ND	ND	Benzene(ppb)	5	ND	ND	Heptachlor epoxide(ppb)	200	ND	ND
<b>Inorganic</b>											
Antimony (ppb)	6	ND	ND	Benzofuran(ppb)	40	ND	ND	Hexachlorobenzene(ppb)	1	ND	ND
Arsenic (ppb)	10	ND	ND	Carbofuran(ppb)	40	ND	ND	Hexachlorocyclopentadiene(ppb)	50	ND	ND
Asbestos (MFL)	7	ND	ND	Carbon Tetrachloride(ppb)	5	ND	ND	Lindane(ppb)	200	ND	ND
Barium (ppm)	2	ND	0.92	Chlordane(ppb)	2	ND	ND	Methoxychlor(ppb)	40	ND	ND
Beryllium (ppb)	4	ND	ND	Chlorobenzene(ppb)	100	ND	ND	Oxamyl [Vydate](ppb)	200	ND	ND
Bromate (ppb)	10	ND	ND	2,4-D	70	ND	ND	Pentachlorophenol(ppb)	1	ND	ND
Cadmium (ppb)	5	ND	ND	Dalapon(ppb)	200	ND	ND	Picloram(ppb)	500	ND	ND
Chloramines(ppm)	4	ND	ND	Dibromochloropropane(ppb)	200	ND	ND	PCBs(ppb)	500	ND	ND
Chlorine (ppm)	4	1.80	1.71	0-Dichlorobenzene(ppb)	600	ND	ND	Simazine(ppb)	4	ND	ND
Chlorine dioxide(ppb)	800	ND	ND	p-Dichlorobenzene(ppb)	75	ND	ND	Styrene(ppb)	100	ND	ND
Chlorite (ppm)	1	ND	ND	1,2-Dichloroethane(ppb)	5	ND	ND	Tetrachloroethylene(ppb)	5	ND	ND
Chromium (ppb)	100	ND	ND	1,1-Dichloroethylene(ppb)	7	ND	ND	Toluene(ppm)	1	ND	ND
Copper (ppm)	AL=1.3	0.07	0.09	Cis-1,2-Dichloroethylene(ppb)	70	ND	ND	TOC	TT	ND	1.20
Cyanide (ppb)	200	ND	ND	trans-1,2-Dichloroethylene(ppb)	100	ND	ND	ITHM(ppb)	80	7.00	25.00
Fluoride (ppm)	4	ND	ND	Dichloromethane(ppb)	5	ND	ND	Toxaphene(ppb)	3	ND	ND
Lead (ppb)	AL=15	ND	ND	1,2-Dichloropropane(ppb)	5	ND	ND	2,4,5-TP (Silvex)(ppb)	50	ND	ND
Mercury (ppb)	2	ND	ND	Di-(2-ethylhexyl)adipate(ppb)	400	ND	ND	1,2,4-Trichlorobenzene(ppb)	70	ND	ND
Nitrate (ppm)	10	1.18	1.00	Di(2-ethylhexyl)phthalates(ppb)	6	ND	ND	1,1,1-Trichloroethane(ppb)	200	ND	ND
Nitrite (ppm)	1	ND	ND	Dinoseb(ppb)	7	ND	ND	1,1,2-Trichloroethane(ppb)	5	ND	ND
Total Nitrate & Nitrite	10	1.18	1.00	Dioxin[2,3,7,8-TCDD](ppq)	30	ND	ND	Trichloroethylene(ppb)	5	ND	0.55
				Diquat(ppb)	20	ND	ND	Vinyl Chloride(ppb)	2	ND	ND
				Endothal(ppb)	100	ND	ND	Xylenes(ppm)	10	ND	ND
				Endrin(ppb)	2	ND	ND				

## Table of Secondary and Unregulated Contaminants

Secondary Drinking Water Standards are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water Munfords required to monitor for the various components. 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.

CONTAMINANT	MCL	Munford	Oxford	CONTAMINANT	MCL	Munford	Oxford	CONTAMINANT	MCL	Munford	Oxford
<b>Secondary</b>											
Aluminum	0.2	ND	ND	Foaming Agents	0.5	ND	ND	Silver	7	ND	ND
Chloride	250	ND	6.00	Iron	0.3	ND	ND	Sulfate	70	ND	ND
Color (PCU)	15	ND	ND	Magnesium	75	ND	ND	Total Dissolved Solids	500	ND	139.00
Copper	1	ND	ND	Odor (T.O.N.)	5	ND	ND	Zinc	5	ND	ND
<b>Special</b>											
Calcium	N/A	ND	ND	pH (SU)	N/A	ND	8.00	Temperature (*C)	N/A	ND	ND
Carbon Dioxide	N/A	ND	ND	Sodium	N/A	ND	4.10	Total Alkalinity	N/A	ND	ND
Manganese	0.05	ND	ND	Specific Conductance (umhos)	<500	ND	ND	Total Hardness (as CaCO3)	N/A	ND	131.00
<b>Unregulated</b>											
1,1 - Dichloropropene	N/A	ND	ND	Bromobenzene	N/A	ND	ND	Hexachlorobutadiene	N/A	ND	ND
1,1,2,2-Tetrachloroethane	N/A	ND	ND	Bromochloromethane	N/A	ND	ND	Isopropylbenzene	N/A	ND	ND
1,1-Dichloroethane	N/A	ND	ND	Bromodichloromethane	N/A	ND	1.75	M-Dichlorobenzene	N/A	ND	ND
1,2,3 - Trichlorobenzene	N/A	ND	ND	Bromofom	N/A	ND	ND	Methomyl	N/A	ND	ND
1,2,3 - Trichloropropane	N/A	ND	ND	Bromomethane	N/A	ND	ND	Metolachlor	N/A	ND	ND
1,2,4 - Trimethylbenzene	N/A	ND	ND	Butachlor	N/A	ND	ND	Metribuzin	N/A	ND	ND
1,2,4-Trichlorobenzene	N/A	ND	ND	Carbaryl	N/A	ND	ND	MTBE	N/A	ND	ND
1,3 - Dichloropropane	N/A	ND	ND	Chloroethane	N/A	ND	ND	N - Butylbenzene	N/A	ND	ND
1,3 - Dichloropropene	N/A	ND	ND	Chlorodibromomethane	N/A	ND	0.55	Naphthalene	N/A	ND	ND
1,3,5 - Trimethylbenzene	N/A	ND	ND	Chlorofom	N/A	ND	3.50	N-Propylbenzene	N/A	ND	ND
2,2 - Dichloropropane	N/A	ND	ND	Chloromethane	N/A	ND	ND	O-Chlorotoluene	N/A	ND	ND
3-Hydroxycarbofuran	N/A	ND	ND	Dibromochloromethane	N/A	ND	ND	P-Chlorotoluene	N/A	ND	ND
Aldicarb	N/A	ND	ND	Dibromomethane	N/A	ND	ND	P-Isopropyltoluene	N/A	ND	ND
Aldicarb Sulfone	N/A	ND	ND	Dichlorodifluoromethane	N/A	ND	ND	Propachlor	N/A	ND	ND
Aldicarb Sulfoxide	N/A	ND	ND	Dieldrin	N/A	ND	ND	Sec - Butylbenzene	N/A	ND	ND
Aldrin	N/A	ND	ND	Fluorotrichloromethan	N/A	ND	ND	Tert - Butylbenzene	N/A	ND	ND
<b>PFAS Compounds</b>											
CONTAMINANT	RESULTS	UNITS	CONTAMINANT	RESULTS	UNITS	CONTAMINANT	RESULTS	UNITS			
11CI-PF3OUdS	BMRL	ug/L	Perfluorodecanoic Acid	BMRL	ug/L	Perfluorooctanoic Acid	0.003	ug/L			
9CI-PF3ONS	BMRL	ug/L	Perfluorohexanoic Acid	0.002	ug/L	Perfluorotetradecanoic Acid	BMRL	ug/L			
ADONA	BMRL	ug/L	Perfluorododecanoic Acid	BMRL	ug/L	Perfluorotridecanoic Acid	BMRL	ug/L			
HFPO-DA	BMRL	ug/L	Perfluoroheptanoic Acid	BMRL	ug/L	Perfluoroundecanoic Acid	BMRL	ug/L			
NEIFOSAA	BMRL	ug/L	Perfluorohexanesulfonic Acid	0.004	ug/L	Total PFAs	0.011	ug/L			
NMeFOSAA	BMRL	ug/L	Perfluorononanoic Acid	BMRL	ug/L			ug/L			
Perfluorobutanesulfonic Acid	0.002	ug/L	Perfluorooctanesulfonic Acid	0.023	ug/L			ug/L			

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

## Table of Detected Drinking Water Contaminants

CONTAMINANT	MCLG	MCL	Range	Munford	Oxford	Amount Detected	Likely Source of Contamination		
<b>Bacteriological Contaminants January - December</b>									
Turbidity	0	TT		ND	0.08	NTU	Soil runoff		
<b>Inorganic Contaminants January - December</b>									
Barium	2	2	ND	ND	0.92	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		
Chlorine	MRDLG 4	MRDL 4	1.15	-	1.80	1.80	1.71	ppm	Water additive used to control microbes
Copper (2016)	1.3	40 Sites AL=1.3	No. of Sites above action level 0		0.07	0.09		ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	0	10 Sites AL=15	No. of Sites above action level 0		ND	ND		ppb	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as N)	10	10	0.74	-	1.18	1.18	1.00	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Nitrate & Nitrite	10	10	0.74	-	1.18	1.18	1.00	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Organic Contaminants January - December</b>									
Haloacetic Acids (HAA5)	0	60	ND	-	ND	ND	18.00	ppb	By-product of drinking water chlorination
Total Organic Carbon (TOC)	N/A	TT	ND	-	ND	ND	1.20	TT	Naturally present in the environment
Total trihalomethanes (TTHM)	0	80	ND	-	7.00	7.00	25.00	ppb	By-product of drinking water chlorination
Trichloroethylene (TCE)	0	5	ND	-	ND	ND	0.55	ppb	Discharge from metal degreasing sites and other factories
<b>Secondary Contaminants January - December</b>									
Chloride	N/A	250	ND	-	ND	ND	6.00	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Total Dissolved Solids	N/A	500	ND	-	ND	ND	139.00	ppm	Erosion of natural deposits
<b>Special Contaminants January - December</b>									
pH	N/A	N/A	ND	-	ND	ND	8.00	SU	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	N/A	N/A	ND	-	ND	ND	4.10	ppm	Naturally occurring in the environment
Total Hardness (as CaCO3)	N/A	N/A	ND	-	ND	ND	131.00	ppm	Naturally occurring in the environment or as a result of treatment with water additives
<b>Unregulated Contaminants January - December</b>									
Bromodichloromethane	N/A	N/A	ND	-	ND	ND	1.75	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Chlorodibromomethane	N/A	N/A	ND	-	ND	ND	0.55	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Chloroform	N/A	N/A	ND	-	ND	ND	3.50	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination