

# 2025 Annual Water Quality Report (Testing Performed January - December 2024)

## MARION WATER DEPARTMENT

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We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. 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.

<b>Water Sources</b>	Three groundwater wells produced from the Gordo aquifer
<b>Additional Connections</b>	Connection with Perry County Water Board to sell as needed
<b>Water Treatment</b>	Disinfection, aeration, flocculation, filtration, corrosion control, and fluoridation
<b>Storage Capacity</b>	Three tanks with a total capacity of 675,000 gallons
<b>Number of Customers</b>	Approximately 1375
<b>City Council</b>	Mavor Dexter Hinton
	Councilman Bernard Arrington
	Councilman Leon Kennie
	Councilman Charles Sanders
	Councilman Willie Jackson
	Councilman Jefferson Nail

Marion hired an additional Grade IV Certified Operator in 2024. The Marion Water System will take bids by November 2025 for the Phase I work that involves upgrades to our water treatment facility. This work will include the installation of selective process equipment needed to ensure proper treatment at the water plant, upgrades to the chemical feed system, replacement of all the filter media, and building renovations. Marion is developing an updated Water Distribution Map and also identifying sources of leaks throughout the distribution system based upon its comprehensive maintenance and repair plan. During 2024, Marion replaced several inoperable valves and fire hydrants. With the assistance of the Alabama Rural Water Association, a water rate study is being finalized to allow the Marion Water System to operate as a sustainable entity to meet their long-term capital improvement plans and the financing approach required to operate satisfactorily.

### Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), Marion Water Department has completed a Source Water Assessment plan that provides additional information such as potential sources of contamination. The plan includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. A copy of the report is available in our office for review during regular business hours, or you may purchase a copy upon request for a nominal reproduction fee.

Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil.

### Information about Lead

Lead in drinking water is rarely found in source water but is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Use *only* water from the cold-water tap for drinking, cooking, and *especially for making baby formula*. Hot water is more likely to cause leaching of lead from plumbing materials. 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. These recommended actions are very important to the health of your family.

Lead levels in your drinking water are likely to be higher if:

- Your home or water system has lead pipes, or
- Your home has faucets or fittings made of brass which contains some lead, or
- Your home has copper pipes with lead solder and you have naturally soft water, and
- Water often sits in the pipes for several hours.

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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

- LEAD SERVICE LINE INVENTORY:

Our Lead Service Line Inventory was completed and submitted by the deadline of October 16, 2024 and a copy of it is in our office as required by EPA. If any would like to view it or has any questions, please feel free to contact our office.

### General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. 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.

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.

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 operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water 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 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 runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immune 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. EPNCDC guidelines on appropriate means to lessen the risk of infection by 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.

Radon is a naturally occurring gas present in some groundwater. Inhaled radon has been linked to lung cancer and may pose a health risk when inhaled after the release from water into the air. This inhalation could occur during showering, bathing, washing dishes, or washing clothes. The radon gas release from drinking water is a relatively small part of the total radon found in air. One major source of radon gas is from the soil, where the gas can seep through the foundations of homes. It is not clear whether ingested (i.e. taken through the mouth) radon contributes to cancer or other adverse health conditions. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on home testing contact (insert name of local health department).

### Questions?

If you have any questions about this report or concerning your water utility, please contact Mr. Brian Moore, Water and Sewer Superintendent, at 334-683-8642. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Mondays of each month at 6:00 p.m. in the council chambers at City Hall.

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

### Monitoring Schedule

Marion Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws, using EPA approved methods and a State certified laboratory. The Alabama Department of Environmental Management (ADEM) allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. We have learned through our monitoring and testing that some constituents have been detected.

Contaminants Monitored	Date Monitored
Inorganic Contaminants	2022
Lead/Copper	2022
Microbiological Contaminants	monthly
Nitrates	2023
Radioactive Contaminants	2021
Synthetic Organic Contaminants (including herbicides and pesticides)	2023
Volatile Organic Contaminants	2023
Stage 2 Disinfection By-products	2023
Per- and polyfluoroalkyl substances (PFAS)	2022

## Monitoring Results

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	Violation YIN	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Alpha emitters	N	3.50	PCI/1	0	15	Erosion of natural deposits
Combined radium (Radium 228)	N	1.26	PCin	0	5	Erosion of natural deposits
Barium	N	0.16	ppm	2	2	Drilling wastes; metal refinery discharge; erosion
Copper	N	0.720 <sup>1</sup>	ppm	1.3	AL=1.3	Corrosion of household plumbing; erosion; leaching from wood preservatives
Dichloromethane [Methylene chloride]	N	ND-1.5	ppb	0	5	Discharge from pharmaceutical and chemical factories
Chlorine	N	0.7-1.80	Ppm	4	4	Water additive used to control microbes
Fluoride	N	0.26	ppm	4	4	Erosion; water additive for teeth; fertilizer and aluminum factory wastes
Lead	N	0.0016 <sup>1</sup>	ppm	0	AL=0.015	Corrosion of household plumbing, erosion
TTHM [Total trihalomethanes]	N	ND	ppb	0	80	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>						
Chloroform	N	ND-0.68	ppb	70	none	Naturally occurring; industrial discharge; agricultural runoff
Bromodichloromethane	N	ND-0.50	ppb	0	none	Naturally occurring; industrial discharge; agricultural runoff
<b>Secondary Contaminants</b>						
Chloride	N	2.3	ppm	none	250	Naturally occurring; agricultural runoff
Hardness	N	52.5	ppm	none	none	Naturally occurring; treatment with water additives
Iron	y2	9.8	ppm	none	0.30	Naturally occurring; erosion; leaching from pipes
Manganese	y2	0.45	ppm	none	0.05	Erosion of natural deposits; leaching from pipes
pH	N	6.9	S.U.	none	none	Naturally occurring; treatment with water additives
Sulfate	N	8.8	ppm	none	250	Naturally occurring; erosion of natural deposits
Total Dissolved Solids	N	70.0	ppm	none	500	Naturally occurring; industrial discharge; agricultural runoff

<sup>1</sup> Figure shown is the 90<sup>th</sup> percentile, and number of sites over the Action Level (AL) - 0.

<sup>2</sup> Secondary exceedance only. NOT a violation of the Primary Drinking Water MCL.

**PFAS Contaminants:** Below is a list of PFAS contaminants for which our system monitored our raw water source in 2022 and the results of that monitoring. *PFAS was not detected in our drinking water.* For more information, please consult [www.epa.gov/pfas](http://www.epa.gov/pfas)

Contaminant	Unit Msmt	Level Detected.	Contaminant	Unit Msmt	Level Detected
11CI-PF3OUdS (11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid)	oob	ND	Perfluoroheotanoic acid	oob	ND
9CI-PF3ONS (9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid)	oob	ND	Perfluorohexanesulfonic acid	oob	ND
ADONA (4,8-dioxa-3H-oxefluorononanoic acid)	oob	ND	Perfluorononanoic acid	oob	ND
HFPO-DA (Hexafluoroorooxylene oxide dimer acid)	oob	ND	Perfluorooctanesulfonic acid	oob	ND
NEIFOSAA (N-ethvloerfluorooctanesulfonamidoacetic acid)	oob	ND	Perfluorooctanoic acid	oob	ND
NMeFOSAA (N-methvloerfluorooctanesulfonamidoacetic acid)	oob	ND	Perfluorotetradecanoic acid	oob	ND
Perfluorobutanesulfonic acid	ppb	ND	Perfluorotridecanoic acid	ppb	ND
Perfluorodecanoic acid	oob	ND	Perfluoroundecanoic acid	oob	ND
Perfluorohexanoic acid	oob	ND	Total PFAS	PDb	ND
Perfluorododecanoic acid	ppb	ND			

### 2024 Violations

**Failure to Perform Activities Required 2024:** Marion Water Department is 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 October 2024, we did not complete all required monitoring for total coliform bacteria and therefore cannot be sure of the quality of your drinking water during that time. Please share this information with all the other people who drink this water especially those who may have not received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public notice or distributing copies by hand or mail.

The missed total coliform samples were an oversight. We routinely take 5 distribution samples per month as required but failed to collect them in October 2024. We will take the required number of samples monthly going forward. Should you have any questions concerning this violation or our monitoring requirements, please contact Mr. Brian Moore, Superintendent, at our office at 104 Hubbard Drive in Marion or by phone at 334-683-8642.

**Notice of Treatment Technique Violation 2024:** The Marion Water Department is required to maintain a minimum disinfectant residual within the distribution system. On September 17, 2024, the residual disinfectant in the distribution system dropped below the required minimum residual of 0.2 mg/L and was not corrected within 4 hours, resulting in a treatment technique violation. Please share this information with all the other people who drink this water, especially those who may have not received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public notice or distributing copies by hand or mail.

Measures taken to correct the problem: The chlorine feed rate was adjusted with adding a post chloring feed to provide chlorine residual levels above 1.5 mg/L throughout the distribution system in less than 24 hours after the low levels were noted. Within this 24-hour period, bacteriological samples were collected at: Marion MMI Cafeteria, Lottie's Restaurant, Whillard's BBQ and Grill, East St. and Davis St. The bacteriological samples results came back absent of any bacteria. Should you have any question concerning this violation or our monitoring requirements, please contact: Brian Moore, Superintendent, at our office at 104 Hubbard Drive in Marion or by phone at 334-683-8642.

**List of Definitions**

**Action Level-** the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

**Coliform Absent (ca)-** Laboratory analysis indicates that the contaminant is not present.

**Cryptosporidium-** a microscopic parasite that can cause disease. mainly diarrhea. if swallowed.

**Disinfection byproducts (DBPs)-** are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.

**Distribution System Evaluation (DSE)-**a 4-quarter study to identify distribution system locations with high concentrations of DBPs.

**Maximum Contaminant Level (MCL)** is the highest level of a contaminant that is allowed in drinking water.

**Maximum Contaminant Level Goal (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 Residual Disinfectant Level (MRDL)-** the highest level of a disinfectant allowed in drinking water

**Maximum Residual Disinfectant Level Goal (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.

**Millirems per year (mrem/yr)-**measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)-**a measure of the clarity of water.

**Non-Detect (ND)-** laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.

**Parts per billion (ppb)** or Micrograms per liter (µg/l)-one part per billion corresponds to one minute in 2,000 years. or a single penny in \$10,000,000.

**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 quadrillion (ppq)** or Picograms per liter (picograms/l)-one part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.

**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.

**Picocuries per liter (pCi/L)-**picocuries per liter is a measure of the radioactivity in water.

**Running Annual Average (LRAA)-**yearly average of all the DPB results at each specific sampling site in the distribution system.

**standard Units (S.U.)-pH** of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas.

**Treatment Technique (TT)-** a required process intended to reduce the level of a contaminant in drinking water.

**Variance & Exemptions (V&E)-**State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**Level 1 Assessment:** "A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system."

**Level 2 Assessment:** "A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions."

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing where applicable. These contaminants were not detected in your drinking water unless they are also listed in the Detected Drinking Water Contaminants

**Standard List or Primary Drinking Water Contaminants**

<b>Bacteriological</b>					
Total Coliform Bacteria	<5%	present/absent	trans-1,2-Dichloroethlene	100	cob
Fecal Coliform and E. coli	0	present/absent	Dichloromethane	5	cob
Turbidity	TT	NTU	1,2-Dichloropropane	5	cob
Cryptosporidium	TT	Calc.organisms	Di (2-ethylhexyl)adipate	400	onb
<b>Radiological</b>					
Beta/photon emitters	4	mrem/yr	Di (2-ethylhexyl)phthalate	6	ppb
Alpha emitters	15	pCi/l	Dinoseb	7	ppb
combined radium	5	pCi/l	Dioxin [2,3,7,8-TCDD]	30	nnn
Uranium	30	pCi/l	Diquat	20	cob
<b>Inorganic</b>					
Endrin			Endothal	100	cob
Antimony	6	oob	Endrin	2	cob
Arsenic	10	ppb	Eoichlorohydrin	11	TT
Asbestos	7	MFL	Ethylbenzene	700	cob
Barium	2	ppm	Ethylene dibromide	50	ppt
Beryllium	4	ppb	Glvohosate	700	ppb
Cadmium	5	ppb	Heptachlor	400	pot
Chromium	100	cob	Heptachlor epoxide	200	ppt
Copper	AL=1.3	com	Hexachlorobenzene	1	opb
Cyanide	200	ppb	Hexachlorocyclooctadiene	50	cob
Fluoride	4	ppm	Lindane	200	pot
Lead	AL=15	ppb	Methoxychlor	40	ppb
Mercury	2	ppb	Oxamyl IVdattel	200	ppb
Nitrate	10	ppm	Polychlorinated biphenyls	0.5	ppb
Nitrite	1	ppm	Pentachlorophenol	1	ppb
Selenium	05	ppm	Picloram	500	ppb
Thallium	.002	ppm	Simazine	4	ppb
			Strene	100	cob
			Tetrachloroethlene	5	ppb
<b>Organic Chemicals</b>					
2,4-D	70	ppb	Toluene	1	ppm
Acrylamide	TT	TT	Toxaphene	3	cob
Alachlor	2	oob	2,4,5-TP(Silvexl)	50	cob
Airazine	3	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzene	5	cob	1,1,1-Trichloroethane	200	cob
Benzo(a)loprene I PAHsl	200	oot	1,1,2-Trichloroethane	5	cob
Carbofuran	40	ppb	Trichloroethlene	5	cob
Carbon tetrachloride	5	Pob	Vinyl Chloride	2	ppb
Chlordane	2	ppb	Xlenes	10	ppm
Chlorobenzene	100	ppb	<b>Disinfections &amp; Disinfections Byproducts</b>		
Dalaoon	200	cob	Chlorine	4	PPm
Dibromochloroethane	200	cob	Chlorine Dioxide	800	cob
1,2-Dichlorobenzene	1000	ppb	Chloramines	4	ppm
1,4-Dichlorobenzene loaral	75	cob	Br01rate	10	cob
o-Dichlorobenzene	600	DDb	Chlorite	1	oom
1,2-Dichloroethane	5	cob	HAA5 rrotal haloacetic acidsl	60	cob
1,1-Dichloroethlene	7	cob	TTHM rrotal trihalomethanesl	80	cob
<b>List of Secondary Contaminants</b>					
Alkalinity, Total (as CA Co.)	Copper	Manaesene	Specific conductance		
Aluminum	Corrosiviv	Odor	Sulfate		
Calcium, as Ca	Foamina aagents (MBASl)	Nickel	Total Dissolved Solids		
Carbon Dioxide	Hardness	oH	Zinc		
Chloride	Iron	Silver			
Color	Maanesium	Sodium			
<b>Unregulated</b>					
Aldicarb	Chloroethane	Dieldrin	Propachlor		
Aldicarb Sulfone	Chloroform	Hexachlorobutadiene	N-Propylbenzene		
Aldicarb Sulfoxide	Chloromethane	3-Hydroxycarbofuran	Propachlor		
Aldrin	o-Chlorotoluene	Isononylbenzene	1,1,1,2-Tetrachloroethane		
Bromoacetic Acid	p-Chlorotoluene	p-Isooctyltoluene	1,1,2,2-Tetrachloroethane		
Bromobenzene	Dibromochloromethane	m-Dichlorobenzene	Tetrachloroethene		
Br01rochloromethane	1,2-Dibromoethane	Methomyl	Trichloroacetic Acid		
Bromodichloromethane	Dibromomethane	Methylene chloride	1,2,3-Trichlorobenzene		
Bromoform	1,1-Dichloroethane	Methyl tert-butyl ether	Trichloroethene		
Bromomethane	1,3-Dichloroethane	Metolachlor	Trichlorofluoromethane		
Butachlor	2,2-Dichloropropane	Metribuzin	1,2,3-Trichloropropane		
n-Butylbenzene	1,1-Dichloropropene	MTBE	1,2,4-Trimethylbenzene		
Sec-Bulylbenzene	1,3-Dichloropropene	Naohthalene	1,3,5-Trimethylbenzene		
Tert - Bulbenzene	Dicamba	1-Naohthol			
Carbarvl	Dichlorodifluoromethane	Paraquat			

