



2023 Water Quality Report

PWS ID#: MS 0250008 and MS0250012



We are pleased to present our 2023 Water Quality Report. We are required to send this report annually, to keep you informed about the quality of the water you are consuming.

About Your Water

This report is designed to inform you about the quality of water and the services we deliver to you every day. Our 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. If you have any questions about this report or concerning your water utility, please contact **601-500-5200**.

Drinking Water Sources

Our groundwater sources are from wells drawing from the Sparta System aquifer. J. H. Fewell Water Treatment Plant (WTP) uses surface water from the Pearl River source, and O.B. Curtis Water Treatment Plant (WTP) uses surface water from the Ross Barnett Reservoir source. The source water assessment has been completed for our public water system to determine the overall susceptibility of its drinking water supply to identify potential sources of contamination. A report containing detailed information on how the susceptibility determinations were made has been furnished to our public water system and is available for viewing upon request. The wells have received low to moderate and the WTPs have received high susceptibility rankings to contamination.



Public Participation Opportunities

We want our valued customers to be informed about their water utility. If you want to learn more, please visit **www.JXNwater.com/events**.

Contaminants in Water

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 EPA'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 can pick up substances resulting from the presence of animals or from human activity.

To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA's regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Contaminants that may be present in source water before we treat it include:	
Pesticides & herbicides	These may come from a variety of sources such as agriculture and residential uses.
Microbial contaminants such as viruses and bacteria	These may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic contaminants such as salts and metals	Inorganic contaminants can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Radioactive contaminants	These contaminants are naturally occurring or may be the result of oil and gas production and mining activities.
Organic chemical contaminants	These include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can come from gas stations, urban storm water runoff, and septic systems.

Fluoride

To comply with the "Regulation Governing Fluoridation of Community Water Supplies," the City of Jackson is required to report certain results pertaining to fluoridation of our water system. For the surface water system **MS0250008**, the number of months in the previous calendar year in which average fluoride sample results were within the optimal range of 0.6 – 1.2 parts per million (ppm) was 12. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6 - 1.2 ppm was 100%. The number of months samples were collected and analyzed in the previous calendar year was 12.

For the **Maddox Rd Groundwater System MS0250012**, the number of months in the previous calendar year in which average fluoride sample results were within the optimal range of 0.6 – 1.2 parts per million (ppm) was 0. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6 - 1.2 ppm was 0%. The number of months samples were collected and analyzed in the previous calendar year was 0. This system adds fluoride to your drinking water to help prevent and reduce cavities and improve overall oral health. Supply-chain issues have limited or prevented this water system's ability to obtain fluoride on a regular basis. The data presented above only reflects the months when this water system added fluoride to your drinking water.

Special Population Advisory

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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/Center for Disease Control guidelines on how to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Drinking Water Hotline 800-426-4791**.

Terms & Abbreviations

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AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
LRAA	Locational Running Annual Average	The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.
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 "Goal" (MCLG) is 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.
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 controlling microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk of health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
N/A	Not Applicable	
NTU	Nephelometric Turbidity Units	A measure of turbidity, or the cloudiness of a fluid.
pCi/L	Picocuries per liter	A measure of the radioactivity in water.
ppm	Parts per million or Milligrams per liter (mg/l)	One part per million corresponds to one minute in two years or a single penny in \$10,000.
ppb	Parts per billion or Micrograms per liter	One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
RAA	Running Annual Average	The level detected is the highest running annual average, computed quarterly, of monthly averages of all samples collected.
TT	Treatment Technique	A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. A treatment technique violation occurs when a water system fails to treat its water in the way prescribed by MSDH and the EPA.

Lead-Specific Information

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 City of Jackson 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. The Mississippi Public Health Laboratory offers lead testing. Please contact **601-576-7582** if you wish to have your water tested. Information on lead in drinking water is available from the **Safe Drinking Water Hotline 800-426-4791** or at www.epa.gov/safewater/lead.

Water Quality Data

The table in this report lists all the drinking water contaminants we detected during the 2023 calendar year. The presence of these 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 January 1 through December 31, 2023. The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

CITY OF JACKSON SURFACE WATER SYSTEMS
WATER QUALITY DATA TABLE - PWSID# MS0250008



Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria	N	Jan-Dec 2023	0	N/A	Present/Absent	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment E Coli comes from human and animal fecal waste
<i>Microbiological Contaminants: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.</i>								
Turbidity - NTU	N	Jan-Dec 2023	0.99 NTU (MAX) Lowest monthly percent of samples meeting TT: 97%	N/A	NTU	NA	TT = 1 NTU TT = 95% of samples ≤ 0.3 NTU	Soil runoff
<i>Turbidity: A measure of the cloudiness of water and an indication of the effectiveness of our filtration system.</i>								
Inorganic Contaminants								
Arsenic	N	10/2023	0.5	0.5 – 0.5	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	10/2023	0.023	0.016 – 0.023	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (as free cyanide)	N	11/2023	0.1	0.02 – 0.1	ppm	0.2	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Nitrate (as Nitrogen)	N	8/2023	0.25	0.18 – 0.25	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen)	N	8/2023	0.079	ND – 0.079	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	N	11/2023	9.1	5.0 – 9.1	ppm	20	N/A	Erosion of natural deposit; Leaching
Fluoride								
Fluoride	N	10/2023	0.76	ND – 0.76	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead and Copper (at the tap)								
Copper	N	01/01/2023 - 06/30/2023	0.1	0 of 100	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
		07/01/2023 - 12/31/2023	0.1	0 of 100				
Lead	N	01/01/2023 - 06/30/2023	6.0	4 of 100	ppb	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
		07/01/2023 - 12/31/2023	10.0	5 of 100				
Disinfectants & Disinfection By-Products								
Haloacetic acid (HAA5)	N	2023	49 (LRAA)	14.0 – 70.1*	ppb	0	60	By-Product of drinking water disinfection
<i>*One sample site for HAA5s, collected in July 2023, had a result of 70.1 ppb. However, the system did not incur an MCL violation as the locational running annual average (LRAA) result for this site was below the MCL of 60 ppb.</i>								
Total Trihalomethane (TTHM)	N	2023	63 (LRAA)	18.7 – 110*	ppb	0	80	By-Product of drinking water disinfection
<i>*Two sample sites collected for TTHMs in July and October 2023 had results from 80.2 ppb to 110 ppb. However, the system did not incur an MCL violation as the locational running annual average (LRAA) results for these sites were below the MCL of 80 ppb.</i>								
Chloramine	N	2023	2.10 (RAA)	0.20 – 4.30	ppm	0	MRDL = 4	Water additive used to control microbes
Total Organic Carbon (TOC)	N	2023	1.2 Removal Ratio (> 1.0 is Required)	1.2 – 1.3	NA	NA	TT	Naturally present in the environment

MADDOX ROAD GROUND WATER SYSTEM

WATER QUALITY DATA TABLE - PWSID# MS0250012



Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria	N	Jan-Dec 2023	0	N/A	Present/Absent	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment E Coli comes from human and animal fecal waste

Microbiological Contaminants: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.

Radioactive Contaminants								
Gross Alpha	N	9/2023 - 10/2023	2.0	ND - 2.0	pCi/L	0	15	Erosion of natural deposits
Radium 226	N	9/2023 - 10/2023	0.48	ND - 0.48	pCi/L	0	5	Erosion of natural deposits
Radium 228	N	9/2023 - 10/2023	1.4	ND - 1.4	pCi/L	0	5	Erosion of natural deposits

Inorganic Contaminants								
Barium	N	10/2023	0.003	0.001 - 0.003	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	10/2023	0.7	ND - 0.7	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits

Fluoride								
Fluoride	N	10/2023	0.24	0.21 - 0.24	ppm	4.0	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories

Contaminant	Violation Y/N	Date Collected	Level Detected	Number of Samples Exceeding AL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Lead and Copper (at the tap)								
Copper	N	01/01/2023 - 12/31/2023	0.1	0 of 30	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	N	01/01/2023 - 12/31/2023	3.0	0 of 30	ppb	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits

Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Disinfectants & Disinfection By-Products								
Haloacetic acid (HAA5)	N	2023	53 (LRAA)	13.8 - 56.4	ppb	0	60	By-Product of drinking water disinfection
Total Trihalomethane (TTHMs)	N	2023	77 (LRAA)	10.3 - 88.2*	ppb	0	80	By-Product of drinking water disinfection

*Two sample sites collected for TTHMs in July and October 2023 had results from 84.7 ppb to 88.2 ppb. However, the system did not incur an MCL violation as the locational running annual average (LRAA) results for these sites were below the MCL of 80 ppb.

Chlorine	N	2023	1.80 (highest Quarterly RAA)	0.07 - 3.50	ppm	0	MRDL = 4	Water additive used to control microbes
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Monitoring and Reporting of Compliance Data Violations

During 2023, the City of Jackson Surface Water System PWSID# MS0250008 received violations under the Lead and Copper Rule (LCR).

Violation: WQP Level Non-Compliance

Compliance Period: 01/01/2023 - 06/30/2023, 7/01/2023 - 12/31/2023

During the monitoring periods of 2018 - 2023, we failed to consistently meet treatment technique requirements for our system which is a violation of the Lead and Copper Rule and a requirement of the City's Optimized Corrosion Control Plan.

Health Effects: Infants and children who drink water containing lead more than the action level could experience delays in their physical or mental development, children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Corrective Actions: We continuously evaluate and make corrections to our existing corrosion control systems to stabilize the pH in the distribution while increased water quality monitoring at the plants and in distribution continues. The completed corrosion control studies actions are being enacted with completion of optimized corrosion control treatment installed at J.H. Fewell WTP on 10/2023. Further optimization of the O.B. Curtis WTP OCCT will be installed by 06/2025.

Significant Deficiencies for System PWSID# MS0250008

During a sanitary survey conducted on 02/03/2020, the Mississippi State Department of Health cited the following significant deficiency(s):

- Monitoring Plans and Systems (2)
- Function and Condition of Treatment Facilities (6)
- Inadequate follow up on previous deficiencies
- **Corrective Actions:** The water system is under an Administrative Compliance Order on Consent, Docket No. SDWA-04-2020-2301 (AOC) through the EPA. All deficiencies are currently scheduled to be addressed by December 2026 contingent upon current approval by the EPA.



Significant Deficiencies for System PWSID# MS0250012

During a sanitary survey conducted on 11/28/2023, the Mississippi State Department of Health cited the following significant deficiency(s):

- Condition of Highway 18 Ground Storage Tank. The system is scheduled to complete this corrective action by 09/30/2024.