JXN water

2024 Water Quality Report

PWS ID#: MS0250008 and MS0250012

2024

This report is one of many opportunities to be transparent with our customers about the quality of our drinking water. We understand trust is built over time and this report is one more way we are keeping the lines of communication open to strengthen that trust.

For questions about the report, or to have one mailed to your home, please contact the call center at (601) 500-5200.

2024 Water Quality Report

PWS ID#: MS0250008 and MS0250012

We are pleased to present our 2024 Water Quality Report. We are required to send this report annually, so our customers are 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 concerning your water utility, please contact **JXN Water at 601.500.5200**.

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.

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

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.

Contaminants that may be present in source water before we treat it 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides & herbicides,* which may come from a variety of sources such as agriculture and residential uses.
- *Radioactive contaminants,* which are naturally occurring or be the result of oil and gas production and mining activities.
- *Organic chemical contaminants,* including 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.

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.

Lead-Specific Information

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. The City of Jackson 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 to reduce lead, 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 JXN Water at 601.500.5200. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at *https://www.epa.gov/safewater/lead*.

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, fluoride was previously added to your drinking water to help prevent and reduce cavities and improve overall oral health. Supply-chain issues and the rising cost of chemicals has limited or prevented this water system's ability to obtain fluoride on a regular basis, thus fluoride has not been added to your drinking water in 2024.

Lead and Copper Rule Revisions

The City of Jackson routinely monitors for lead and copper at pre-approved customer taps as required by Federal and State regulations. We proudly announce that our system has remained below the lead action level of 15 ppb since 2017. Results from our previous monitoring event are available upon request through JXN Water 601.500.5200.

In compliance with the EPA's Lead and Copper Rule Revisions (LCRR), the City of Jackson has completed and submitted a service line inventory identifying the service line materials used in our distribution system. Below you will find details regarding what the inventory identified.

City of Jackson Surface Water System PWSID# MS0250008

The inventory identified 13,597 galvanized requiring replacement service lines, 22,424 service lines with unknown lead status, and 26,450 non-lead service lines, for a total of 62,471 service lines.

City of Jackson-Maddox Rd. Ground Water System PWSID# MS0250012

The inventory identified 2 galvanized requiring replacement service lines, 5,345 service lines with unknown lead status, and 5,695 non-lead service lines, for a total of 11,042 service lines.

The service line inventory information is available by using the interactive map on the JXN Water website.

Unregulated Contaminants Monitoring Rule (UCMR)

The City of Jackson-Maddox Rd Ground Water System participated in the EPA's fifth round of UCMR testing, known as UCMR5, which required us to monitor for 30 chemical contaminants using analytical methods approved by the EPA. The EPA has implemented UCMR to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. The EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether these contaminants will be regulated in the future or not. The first round of UCMR5 monitoring for the City of Jackson-Maddox Rd Ground Water System resulted in all non-detects, meaning that none of these 30 chemical contaminants were found in our water source.

Water Quality Data

The table in this report lists all the drinking water contaminants we detected during the 2024 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, 2024. 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 Organic Carbon (TOC)	N	2024	1.1 Removal Ratio (> 1.0 is Required)	1.0 – 1.2	NA	NA	TT	Naturally present in the environment
Turbidity - NTU	N	Jan – Dec 2024	0.36 NTU (MAX) Lowest monthly percent of samples meeting TT: 100%	0.02 – 0.36	NTU	NA	TT = 1 NTU TT = 95% of samples ≤ 0.3 NTU	Soil runoff
Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system.								
Inorganic Contaminants								
Barium	N	2/2024	0.026	0.022 – 0.026	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (as free cyanide)	N	4/2024 & 6/2024	127	16 – 127	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Chromium	N	2/2024	0.7	ND – 0.7	ppb	100	100	Erosion of natural deposits; discharge from industrial factories
Nitrate (as Nitrogen)	N	2/2024	0.46	0.37 – 0.46	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen)	N	2/2024	0.069	ND – 0.069	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	N	2/2024	4.4	3.8 – 4.4	ppm	20	N/A	Erosion of natural deposit; Leaching
Fluoride								
Fluoride	N	2/2024	0.55	ND – 0.55	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects	# of Samples Exceeding AL	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Lead and Copper (at the tap)									
Copper	N	01/01/2024 - 06/30/2024	0.1	0.002 – 0.2	0 of 101	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
		07/01/2024 - 12/31/2024	0.1	0.002 – 0.2	0 of 100				
Lead	N	01/01/2024 - 06/30/2024	7	ND - 1030	5 of 101	ppb	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
		07/01/2024 - 12/31/2024	5	ND - 30	2 of 100				

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)	Y	2024	62* (LRAA)	14.4 – 97.3	ppb	0	60	By-Product of drinking water disinfection.
*During 4th quarter 2024, the LRAA at 1 sample site exceeded the MCL of 60 ppb for HAA5. As a result, a public notice was distributed to notify the public of the exceedance, what is being done, and the health effects.								
Total Trihalomethane (TTHM)	Y	2024	88* (LRAA)	17.7 – 131	ppb	0	80	By-Product of drinking water disinfection.
*During 3rd quarter (2 sample sites) and 4th quarter (4 sample sites) in 2024, the LRAA for these sites exceeded the MCL of 80 ppb for TTHMs. As a result, a public notice was distributed to notify the public of the exceedance, what is being done, and the health effects.								
Chloramine	N	2024	2.70 (RAA)	0.31 – 4.40	ppm	0	MRDL = 4	Water additive used to control microbes

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**
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	2/2024	0.004	0.002 – 0.004	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	N	2/2024	5.9	2.2 – 5.9	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Volatile Organic Contaminants								
Carbon Tetrachloride	N	3/2024	0.52	ND – 0.52	ppb	0	5	Discharge from chemical plants and other industrial activities
Fluoride								
Fluoride	N	2/2024	0.23	0.22 – 0.23	ppm	4.0	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories

Lead and Copper (at the tap)								
Contaminant	**Violation Y/N**	**Date Collected**	**Level Detected**	**Range of Detects**	**# of Samples Exceeding AL**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Copper	N	01/01/2024 – 12/31/2024	0.1	0.007 – 0.33	0 of 30	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	N	01/01/2024 – 12/31/2024	2	ND – 3.5	0 of 30	ppb	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants & Disinfection By-Products								
Contaminant	**Violation Y/N**	**Date Collected**	**Level Detected**	**Range of Detects**	**Unit Measurement**	**MCLG**	**MCL**	**Likely Source of Contamination**
Haloacetic acid (HAA5)	N	2024	59 (LRAA)	26.5 – 97.3*	ppb	0	60	By-Product of drinking water disinfection.
*4 sample sites collected for HAA5's in 4th quarter 2024 had results from 62.6 ppb to 97.3 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 60 ppb.								
Total Trihalomethane (TTHMs)	Y	2024	83* (LRAA)	40.2 – 81.7	ppb	0	80	By-Product of drinking water disinfection.
*During 1st quarter (2 sample sites), 2nd quarter (2 sample sites), and 3rd quarter (1 sample site) in 2024, the LRAA for these sites exceeded the MCL of 80 ppb for TTHMs. As a result, a public notice was distributed to notify the public of the exceedances, what is being done, and the health effects.								
Chlorine	N	2024	1.7 (highest Quarterly RAA)	0.08 – 2.2	ppm	0	MRDL = 4	Water additive used to control microbes

Terms & Abbreviations

AL: Action Level - the concentration of a contaminant which when exceeded triggers treatment or other requirements that 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	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.
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.	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.
N/A: not applicable	ND: Non-Detected
ppb: parts per billion or micrograms per liter	ppm: parts per million or milligrams per liter
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water	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.	NTU: Nephelometric Turbidity Units

Revised Total Coliform Rule (RTCR) – Level I Assessment

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. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments(s) to identify problems and to correct any problems that were found during these assessments.

A Level I 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.

During 2024, we were required to conduct 1 Level I assessment due to failure to collect repeat samples following a total coliform positive sample. As a result, a Level I assessment was completed on 10/24/2024. In addition, we were required to take 4 corrective actions, and we completed all 4 of these actions. Corrective actions taken by this water system to correct the situation that caused this assessment were:

- Reviewing lab results once received to avoid relying on the Mississippi Public Health Lab to notify staff of positive results.
- Disinfect and flush the newly installed sample tap at this regularly used RTCR sample site to ensure no contamination from the tap is resulting in Total Coliform positive results.
- Collect and analyze repeat samples as required per the RTCR.
- Complete Level I assessment.

Monitoring and Reporting of Compliance Data Violations
During 2024, the City of Jackson Surface Water System PWSID# MS0250008 and the City of Jackson-Maddox Rd Ground Water System PWSID# MS0250012 received the following violations as shown in the table below:

MS0250008 Violations for 2024

VIOLATIONS	Comments	Compliance Period	Corrective Actions	Health Effects Language
Lead and Copper Rule (LCR)				
WQP Level Non-Compliance	During the monitoring periods of 2018 - 2024, 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.	01/01/2024 - 06/30/2024 07/01/2024 - 12/31/2024	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 06/2026.	There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups, especially pregnant people, infants (both formula-fed and breastfed), and young children. Some of the health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney, or nervous system problems. Contact your health care provider for more information about your risks.
Stage 2 Disinfection By-Products Rule (DBPR)				
TTHM LRAA MCL exceedance	During 3rd quarter (2 sample sites) and 4th quarter (4 sample sites) in 2024, the LRAA for these sites exceeded the MCL of 80 ppb for TTHMs which resulted in a violation.	07/01/2024 - 09/30/2024 10/01/2024 - 12/31/2024	As a result of the LRAA MCL exceedances, we are evaluating corrective actions to our treatment facilities to stabilize the distribution system and will continue to do so until a steady downward trend of DBP formation is achieved. We have also increased water quality monitoring as well as optimizing treatment processes.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
HAA5 LRAA MCL exceedance	During 4th quarter 2024, the LRAA at 1 sample site exceeded the MCL of 60 ppb for HAA5 which resulted in a violation.	10/01/2024 - 12/31/2024		Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

MS0250012 Violations for 2024

VIOLATIONS	Comments	Compliance Period	Corrective Actions	Health Effects Language
TTHM LRAA MCL exceedance	During 1st quarter (2 samples sites), 2nd quarter (2 sample sites), and 3rd quarter (1 sample site) in 2024, the LRAA for these sites exceeded the MCL of 80 ppb for TTHMs which resulted in a violation.	01/01/2024 - 03/31/2024 04/01/2024 - 06/30/2024 07/01/2024 - 09/30/2024	As a result of the LRAA MCL exceedances, we are evaluating corrective actions to our treatment facilities to stabilize the distribution system. We have increased water quality monitoring as well as implemented a proactive flushing protocol to help reduce water age and the formation of DBP's.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

Significant Deficiencies for System PWSID# MS0250008
During sanitary surveys conducted on 11/21/2019 and 02/03/2020, the Mississippi State Department of Health cited twenty (20) significant deficiencies. Currently, four (4) significant deficiencies remain from the 2020 Inspection Reports. Those that remain unresolved are currently in progress to be completed and are listed below:

- Function and Condition of Treatment Facilities (2)
- Disinfection System (1)
- Automatic Controls (1)

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.