# JXN ~ Water

# **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 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. Immunecompromised 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 &
Action Level	The concentration requirements whic
Locational Running Annual Average	The average of sar location during the
Maximum Contaminant Level	The highest level of close to the MCLG
Maximum Contaminant Level Goal	The "Goal" (MCLG no known or expec
Maximum Residual Disinfectant Level	The highest level of evidence that addition contaminants.
Maximum Residual Disinfectant Level Goal	The level of a drink risk of health. MRE microbial contami
Not Applicable	
Nephelometric Turbidity Units	A measure of turbi
Picocuries per liter	A measure of the r
Parts per million or Milligrams per liter (mg/l)	One part per milli in \$10,000.
Parts per billion or Micrograms per liter	One part per billio in \$10,000,000.
Running Annual Average	The level detected monthly averages
Treatment Technique	A treatment techn contaminant in dri system fails to trea
	Locational Running Annual Average Maximum Contaminant Level Maximum Contaminant Level Goal Maximum Residual Disinfectant Level Maximum Residual Disinfectant Level Goal Not Applicable Nephelometric Turbidity Units Picocuries per liter Parts per million or Milligrams per liter (mg/l) Parts per billion or Micrograms per liter Running Annual Average

#### **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.



#### Abbreviations

n of a contaminant which, if exceeded, triggers treatment or other ich a water system must follow.

imple analytical results for samples taken at a particular monitoring ne previous four calendar quarters.

of a contaminant that is allowed in drinking water. MCLs are set as Gs as feasible using the best available treatment technology.

G) is the level of a contaminant in drinking water below which there is ected risk to health. MCLGs allow for a margin of safety.

of a disinfectant allowed in drinking water. There is convincing dition of a disinfectant is necessary for controlling microbial

king water disinfectant below which there is no known or expected DLGs do not reflect the benefits of the use of disinfectants to control inants.

pidity, or the cloudiness of a fluid.

radioactivity in water.

lion corresponds to one minute in two years or a single penny

ion corresponds to one minute in 2,000 years, or a single penny

d is the highest running annual average, computed quarterly, of s of all samples collected.

nique is a required process intended to reduce the level of a rinking water. A treatment technique violation occurs when a water at its water in the way prescribed by MSDH and the EPA.

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

Note Control in Problem 1 and the problem	Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects	Unit Measurement	MCLG	MCL	Likely Source
Nome       Jan-Doc 2023       0       N/A       Present/Absent       0       bacteria in Figs of monthly spaces       Nutural present monthly spaces       Nutural present       Nutural present <t< td=""><td>Microbiological Contamina</td><td>ants</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Microbiological Contamina	ants							
Indication of the division water distribution system.       0.99 NTU (MAX)       N/A       NTU       NT       TT = 195% of samples so 3 NTU         Turbidity - NTU       N       Jan-Doc 2023       Lowest monthly percent of samples so 3 NTU       NN       NTU       NN       TT = 10TU       Samples So 3 NTU         Turbidity - NTU       N       A       TT = 10TU       Samples So 3 NTU       Samples So 3 N	Total Coliform Bacteria	N	Jan-Dec 2023	0	N/A	Present/Absent	0	bacteria in 5% of	Naturally preser fecal waste
Turbidity - NTU       N       Jan-Dec 2021       Lowest monthly percent of simple section T1 stype       NTU       N       T T = 95 M (1)       Selinancial simple s to 100 (1)         Turbidity - NTU       Homestare of the clocation and indication term into and indinand into and indication term into and indinand into and indinand			acteria that are naturally pres	ent in the environment and are us	ed as an indicator tha	at other, potentially l	harmful, w	aterborne pathogens m	ay be present or a
Torbic Semiples meeting TT: 97%semiples $\leq 0.3$ NTUTurbication set to the effectiveness of our filtration systemTurbication of the effectiveness of our filtration systemTorbication of the effectiveness of our filtration systemTorbication of net colspan="4">Torbication of net colspan="4"Torbication of net colspan="4"Torbication of net colspan="4"Torbication of net colspan="4"Torbication of net colspan="4" <t< td=""><td></td><td></td><td></td><td>0.99 NTU (MAX)</td><td></td><td></td><td></td><td>TT = 1 NTU</td><td></td></t<>				0.99 NTU (MAX)				TT = 1 NTU	
Inorganic Contaminants       Arsenic     N     10/2023     0.5     0.5 - 0.5     ppb     n/a     10     Fusion of rate runnel from glue runnel from	Turbidity - NTU	N	Jan-Dec 2023		N/A	NTU	NA		Soil runoff
ArsenicN10/20230.50.50.5ppbn/a10Erosion of nat rundif from fid rundif from fidBariumN10/20230.0230.0160.023ppm222Pischarge of rundif from fid erosion of natCyande (as free cyande)N11/20230.10.02 - 0.1ppm0.20.2Discharge of rundif from fid erosion of natNitrite (as Nitrogen)N8/20230.079ND - 0.079ppm11Rundif from fid erosion of natSodiumN11/20230.079ND - 0.079ppm20N/AErosion of natSodiumN11/20230.076ND - 0.76ppm44Erosion of natEloridoN10/2023 - 06/30/20230.10 of 100ppm44Erosion of natCopper01/01/2023 - 06/30/20230.10 of 100ppm44Erosion of natCopper01/01/2023 - 06/30/20230.10 of 100ppm1AL = 13Nechrage forLada01/01/2023 - 06/30/20230.00 of 100ppm1AL = 13Nechrage forCopper101/01/2023 - 06/30/20230.00 of 100ppm060Ney-Product ofHolacetta did (HAAS)N20234.9 (LRAA)14.0 - 70.1*ppb060Ney-Product of***********************************	Turbidity: A measure of the cloud	diness of wat	er and an indication of the e	fectiveness of our filtration system	т.				
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barhum cyanide (as free exanide)N00/20300/2030002300010002 - 01ppm22erosion of natCyanide (as free exanide)N11/20230.10.02 - 01ppm0.20.20.20.30.5ppm100.50.50.5ppm100.5 <td>Arsenic</td> <td>Ν</td> <td>10/2023</td> <td>0.5</td> <td>0.5 - 0.5</td> <td>ppb</td> <td>n/a</td> <td>10</td> <td>Erosion of natur runoff from glas</td>	Arsenic	Ν	10/2023	0.5	0.5 - 0.5	ppb	n/a	10	Erosion of natur runoff from glas
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Disinfection By-Products       Haloacetic acid (HAA5)     N     2023     49 (LRAA)     14.0 – 70.1*     ppb     0     60     By-Product of       *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 variable 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 variable for Total Trihalomethane (TTHM)     N     2023     63 (LRAA)     18.7 – 110*     ppb     0     80     By-Product of       *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 (CRAA)     NA     NA     MRDL = 4     Water additive       Chloramine     N     2023     1.2 Removal Ratio     12 – 13     NA     NA     Table	Lead	N				ppb	0	AL = 15	Corrosion of ho
Haloacetic acid (HAA5)N202349 (LRAA)14.0 - 70.1*ppb060By-Product of*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 ofTotal Trihalomethane (TTHM)N202363 (LRAA)18.7 - 110*ppb080By-Product of*Two sample sites collected for THMs 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) average (ChloramineN20232.10 (RAA)0.20 - 4.30ppm0MRDL = 4Water additiveTotal Organic Carbon (TOC)N20231.2 Removal Ratio1.2 - 1.3NANATrNaturally pression	Disinfoctants & Disinfoctiv	on By-Brod		10.0	5 01 100				
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Total Organic Carbon (TOC) N. 2023 1.2 Removal Ratio 12 – 13 NA NA TT Naturally pres	*Two sample sites collected for T	THMs in July	and October 2023 had result	s from 80.2 ppb to 110 ppb. Howev	ver, the system did no	ot incur an MCL vio	lation as tl	he locational running a	nnual average (L
12 - 13 NA NA LL Neturally pres	Chloramine	N	2023	2.10 (RAA)	0.20 - 4.30	ppm	0	MRDL = 4	Water additive u
	Total Organic Carbon (TOC)	Ν	2023		1.2 – 1.3	NA	NA	ТТ	Naturally preser



#### ce of Contamination

#### sent in the environment E Coli comes from human and animal

or that a potential pathway exists through which contamination may

- tural deposits; runoff from orchards; ass and electronics production wastes
- drilling wastes; discharge from metal refineries; tural deposits
- m steel/metal factories; discharge from rtilizer factories
- ertilizer use; leaching from septic tanks, sewage; tural deposits
- ertilizer use; leaching from septic tanks, sewage; tural deposits
- tural deposit; Leaching

tural deposits; water additive which promotes strong teeth; m fertilizer and aluminum factories

nousehold plumbing systems; erosion of natural deposits; wood preservatives

nousehold plumbing systems, erosion of natural deposits

f drinking water disinfection

was below the MCL of 60 ppb.

f drinking water disinfection

(LRAA) results for these sites were below the MCL of 80 ppb.

e used to control microbes

sent 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	
Microbiological Contaminants									
Total Coliform Bacteria	Ν	Jan-Dec 2023	0	N/A	Present/Absent	0	Presence of coliform bacteria in 5% of monthly samples	Naturally presen animal fecal was	

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.

Ν	9/2023 - 10/2023	2.0	ND - 2.0	pCi/L	0	15	Erosion of natur
N	9/2023 - 10/2023	0.48	ND – 0.48	pCi/L	0	5	Erosion of natur
N	9/2023 - 10/2023	1.4	ND – 1.4	pCi/L	0	5	Erosion of natur
Ν	10/2023	0.003	0.001 - 0.003	ppm	2	2	Discharge of dri natural deposits
N	10/2023	0.7	ND - 0.7	ppb	100	100	Discharge from
Ν	10/2023	0.24	0.21 - 0.24	ppm	4.0	4.0	Water additive v discharge from f
Violation Y / N	Date Collected	Level Detected	Number of Samples Exceeding AL	Unit Measurement	MCLG	MCL	Likely Source
ıp)							
Ν	01/012023 - 12/31/2023	0.1	0 of 30	ppm	1.3	AL = 1.3	Corrosion of hou from wood prese
Ν	01/01/2023 - 12/31/2023	3.0	0 of 30	ppb	0	AL = 15	Corrosion of hou
Violation Y/N	Date Collected	Level Detected	Range of Detects	Unit Measurement	MCLG	MCL	Likely Source
n By-Prod	ucts						
N	2023	53 (LRAA)	13.8 – 56.4	ppb	0	60	By-Product of d
N	2023	77 (LRAA)	10.3 - 88.2*	ppb	0	80	By-Product of di
「HMs in July	and October 2023 had result	s from 84.7 ppb to 88.2 ppb. Ho	wever, the system did not	incur an MCL viol	ation as th	e locational running ar	inual average (LR
N							
	N       N	N     9/2023 - 10/2023       N     01/012023 - 12/31/2023       N     2023	N     9/2023 - 10/2023     2.0       N     9/2023 - 10/2023     0.48       N     9/2023 - 10/2023     1.4       N     9/2023 - 10/2023     1.4       N     9/2023 - 10/2023     0.003       N     10/2023     0.003       N     10/2023     0.7       N     10/2023     0.7       N     10/2023     0.24       N     10/2023     0.24       N     10/2023     0.24       N     10/2023     1.4       N     10/2023     0.24       N     10/2023     1.4       N     10/2023     1.2       N     01/012023     1.2       N     01/012023     1.2       N     01/012023     3.0       IN     Date     Level       Detected     Detected       Detected     Detected       N     2023     53 (LRAA)       N     2023     77 (LRAA)	N     9/2023 - 10/2023     2.0     ND - 2.0       N     9/2023 - 10/2023     0.48     ND - 0.48       N     9/2023 - 10/2023     1.4     ND - 1.4       N     9/2023 - 10/2023     1.4     ND - 1.4       N     9/2023 - 10/2023     1.4     ND - 1.4       N     9/2023 - 10/2023     0.003     0.001 - 0.003       N     10/2023     0.7     ND - 0.7       N     10/2023     0.7     ND - 0.7       N     10/2023     0.24     0.21 - 0.24       N     10/2023     0.24     0.21 - 0.24       N     10/2023 - 12/31/2023     0.1     0 of 30       N     01/01/2023 - 12/31/2023     3.0     0 of 30       N     01/01/2023 - 12/31/2023     3.0     0 of 30       N     01/01/2023 - 12/31/2023     3.0     0 of 30       N     Dotected     Petected     Paneers       N     Dotected     So (f Detects)     So (f Detects)       N     2023     53 (LRAA)     13.8 - 56.4       N     2023     77 (LRAA)     10.3 - 88.2*	N       9/2023 - 10/2023       2.0       ND - 2.0       pCi/L         N       9/2023 - 10/2023       0.48       ND - 0.48       pCi/L         N       9/2023 - 10/2023       1.4       ND - 0.48       pCi/L         N       9/2023 - 10/2023       1.4       ND - 0.48       pCi/L         N       9/2023 - 10/2023       1.4       ND - 0.48       pCi/L         N       9/2023 - 10/2023       1.4       ND - 0.48       pCi/L         N       10/2023       0.003       0.001 - 0.048       ppm         N       10/2023       0.7       ND - 0.7       ppb         Violation       Date       Level       ND - 0.7       ppm         Violation       Date       Level       Number of Samples       Unit         N       01/012023 - 12/31/2023       0.1       0 of 30       ppm         N       01/01/2023 - 12/31/2023       0.1       0 of 30       ppb         Violation       Date       Level       Range       Unit         N       2023       53 (LRAA)       13.8 - 56.4       ppb         N       2023       77 (L	N9/2023 - 10/20232.0ND - 2.0pCi/L0N9/2023 - 10/20230.48ND - 0.48pCi/L0N9/2023 - 10/20231.4ND - 1.4pCi/L0N9/2023 - 10/20231.4ND - 1.4pCi/L0N9/2023 - 10/20231.4ND - 1.4pCi/L0N10/20230.0030.001 - 0.003ppm2N10/20230.77ND - 0.7ppb100VolationDateLevelNumber of SamplesMeasurementMcLeN01/012023 - 12/31/20230.10 of 30ppm13N01/012023 - 12/31/20233.00 of 30ppm0ViolationDateLevelRange of DetectedMeasurementMcLeN2023153 (LRAA)13.8 - 56.4ppb0N20233.77 (LRAA)10.3 - 88.2*ppb0	N9/2023 · 10/20232.0ND - 2.0pCi/L015N9/2023 · 10/20230.48ND - 0.48pCi/L05N9/2023 · 10/20231.4ND - 1.4pCi/L05N9/2023 · 10/20231.4ND - 1.4pCi/L05N10/20230.0030.001 - 0.003ppm222N10/20230.7ND - 0.7ppb100100N10/20230.7ND - 0.7ppb100100N10/20230.240.21 - 0.24ppm4.04.0ViolationDate CollectedLevel DetectedNumber of Samples Exceeding ALVolt MeasurementMCLGMCLN01/012023 - 12/31/20230.10 of 30ppm1.3AL = 1.3N01/012023 - 12/31/20233.00 of 30ppb0AL = 15Violation Y/NDate CollectedLevel DetectedRange of DetectsWint MeasurementMCLGMCLN202353 (LRAA)13.8 - 56.4ppb0.06060



#### ce of Contamination

sent in the environment E Coli comes from human and vaste

tural deposits

tural deposits

tural deposits

drilling wastes; discharge from metal refineries; erosion of its

m steel and pulp mills; erosion of natural deposits

e which promotes strong teeth; erosion of natural deposits; n fertilizer and aluminum factories

ce of Contamination

nousehold plumbing systems; erosion of natural deposits; leaching eservatives

nousehold plumbing systems, erosion of natural deposits

ce of Contamination

f drinking water disinfection

f drinking water disinfection

LRAA) results for these sites were below the MCL of 80 ppb.

e used to control microbes



#### **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.