

2019 Annual Drinking Water Quality Report



PWS#: 0250008
May 2020

We're pleased to present to you this year's Annual Quality Water 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.

If you have any questions about this report or concerning your water utility, please contact Mary D. Carter, Deputy Director of Water Operations, at 601.960.2091 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 every other Tuesday of the month at 10:00 AM or 6:00 PM within the City Hall.

Our water source is from wells drawing from the Sparta System, J. H. Fewell WTP is surface water intake for Pearl River, O.B. Curtis WTP is surface water intake from the Ross Barnett Reservoir. The source water assessment has been completed for our public water system to determine the overall susceptibility of its drinking water supply to identified 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 for the City have received lower to moderate susceptibility rankings to contamination.

We routinely monitor for contaminants in your drinking water according to Federal and State laws. This table below lists all of the drinking water contaminants that we detected during the period of January 1st to December 31st, 2019. In cases where monitoring wasn't required in 2019, the table reflects the most recent results. As water travels over the surface of land or underground, it dissolves naturally occurring minerals and, in some cases, radioactive materials and can pick up substances or contaminants from the presence of animals or from human activity; microbial contaminants, such as viruses and bacteria, that 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 and herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, 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 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 that limit the amount of certain contaminants in water provided by public water systems. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily indicate that the water poses a health risk.



dead or if they are capable of causing disease. Ingestion of the Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium and Giardia Lamblia must be ingested to cause disease, and it may be spread through means other than drinking water.

Significant Deficiencies

Monitoring and Reporting of Compliance Data Violations: During a sanitary survey conducted on 11/18/2016 & 11/21/2019, the Mississippi State Department of Health cited the following significant deficiency(s): Function and Condition of Treatment Facilities Corrective Actions: This system does not have a compliance plan or documentation showing the item has been corrected. Enforcement action is scheduled for this system by 12/31/20.

Additionally, we were cited for Non-Compliance of Water Quality Parameter requirements of our Optimized Corrosion Control Treatment plan during the following compliance periods: January to June 2016; January to June 2018; July to December 2018; January to June 2019; July to December 2019.

To comply with the "Regulation Governing Fluoridation of Community Water Supplies", our system is required to report certain results pertaining to fluoridation of our water system. 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 ppm was 11. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6-1.2 ppm was 76%.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. 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 the 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 at 1.800.426.4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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/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 1.800.426.4791.

The City of Jackson 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.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

Maximum Contaminant Level (MCL) - The "Maximum Allowed" (MCL) is 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 Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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.

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.

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

* Most recent sample. No sample required for 2019.

Microbiological Contaminants:

(1) Total Coliform/E Coli. 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.

In 2019, during June our system had one sample out of 128 that tested positive for total coliform, in August 2 out of 128, and in October 1 sample 122. All resample were clear showing that our water meets the drinking water standards.

Our system received the following violations that the public notice has been completed for: OCCT/SOWT Install Demonstration (LCR) and WQP Level Non-Compliance (LCR).

We are required to monitor your drinking water for specific contaminants on a monthly basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. In an effort to ensure systems complete all monitoring requirements, MSDH now notifies systems of any missing samples prior to the end of the compliance period.

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. Our water system 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

TEST RESULTS									
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measurement	MCLG	MCL	Likely Source of Contamination	
Microbiological Contaminants									
1. Total Coliform Bacteria	N	June August October	Positive	1 out of 128 2 out of 128 2 out of 122	NA	0		presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Cryptosporidium/ Giardia lamblia	N	2019	Positive	2 out of 16 4 out of 16		0		TT	Human and animal fecal waste
Turbidity	N	2019	0.49	Lowest monthly % below 0.3 NTU = 95.6 %	NA	0		TT	Soil runoff
Total Organic Carbon	N	2019	1.37 Average	45% - 50%	NA	0		TT	Naturally present in the environment
Radioactive Contaminants									
5. Gross Alpha	N	2019*	2.4	.79 - 2.4	pCi/L	0	15	Erosion of natural deposits	
6. Radium 226 Radium 228	N	2019	.57 .66	.29 - .57 .52 - .66	pCi/L	0	5	Erosion of natural deposits	
Inorganic Contaminants									
8. Arsenic	N	2018*	.9	.7 - .9e	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	
10. Barium	N	2018*	.0247	.0018 - .0247	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
13. Chromium	N	2018*	5.4	.8 - 5.4	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits	
14. Copper	N	7/01/19-12/31/19	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	
15. Cyanide	N	2019	45	No Range	ppb	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	
16. Fluoride	N	2019	1.28	.735 - 1.28	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	
17. Lead	N	7/01/19-12/31/19	7	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits	
19. Nitrate (as Nitrogen)	N	2019	.3	.27 - .3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
20. Nitrite (as Nitrogen)	N	2019	.05	No Range	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Sodium	N	2019	130000	3000 - 130000	PPB	NONE	NONE	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.	
Disinfection By-Products									
81. HAA5	N	2019	54	6 - 64	ppb	0	60	By-Product of drinking water disinfection.	
82. THM [Total trihalomethanes]	N	2019	46	14.2 - 51	ppb	0	80	By-product of drinking water chlorination.	
Chlorine	N	2019	1.9	.03 - 3.9	mg/l	0	MRDL = 4	Water additive used to control microbes	
Unregulated Contaminants									
Bromide	N	2019	23.6	No Range	UG/L			Naturally-occurring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicines and as a germicide	
Germanium	N	2019	.38	.30 - .38	UG/L	0.3	MRL 0.3	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications	
Manganese	N	2019	74.3	.4 - 74.3	UG/L	0.4	MRL 0.4	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemicals; essential nutrient	
HAA5	N	2019	105.6	.62 - 105.6	UG/L				
HAA6BR	N	2019	3.74	.36 - 3.74	UG/L				
HAA9	N	2019	108.9	.62 - 108.9	UG/L				
Total Organic Carbon	N	2019	9520	6760 - 9520	UG/L			Comes from decaying natural organic matter	

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>. The Mississippi State Department of Health Public Health Laboratory offers lead testing. Please contact 601.576.7582 if you wish to have your water tested.

Our system monitored for Cryptosporidium and Giardia Lamblia and detected the constituent Cryptosporidium in 2 of the 16 samples tested and Giardia Lamblia in 4 of the 16 samples tested. Cryptosporidium and Giardia are microbial pathogens found in surface water throughout the U.S. Although filtration removes Cryptosporidium and Giardia Lamblia, the most commonly used filtration methods cannot guarantee 100 percent removal. Out monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are