

2021 Annual Drinking Water Quality Report  
 City of Grenada  
 PWS#: 220003, 220004, 220005, 220007, 220036 & 220062  
 April 2022

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 Fred Chapman at 662.688.7867. 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 second Tuesday of the month at 7:00 PM at City Hall.

Our water source is from wells drawing from the Meridian Upper Wilcox, Middle Wilcox and Lower Wilcox Aquifers. 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 of Grenada have received lower to higher 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 were detected during the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2021. In cases where monitoring wasn't required in 2021, 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.

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 to 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.

PWS ID#:0220003		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
<b>Microbiological Contaminants</b>								
1. Total Coliform Bacteria	N	October	Positive	1	NA	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment

<b>Radioactive Contaminants</b>									
6. Radium 226 Radium 228	N	2019*	.80 .52	.57 - .80 .49 - .52	pCi/L	0		5	Erosion of natural deposits
<b>Inorganic Contaminants</b>									
10. Barium	N	2018*	.1712	.0749 - .1712	ppm	2	2		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2018*	.9	No Range	ppb	100	100		Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2019/21	.6	0	ppm	1.3	AL=1.3		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2018*	.771	.134 - .771	ppm	4	4		Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2019/21	1	0	ppb	0	AL=15		Corrosion of household plumbing systems, erosion of natural deposits
Sodium	N	2021	25.3	No Range	ppm	20	0		Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
<b>Disinfection By-Products</b>									
81. HAA5	N	2021	6.94	No Range	ppb	0	60		By-Product of drinking water disinfection.
Chlorine	N	2021	1.1	0 – 1.9	ppm	0	MDRL = 4		Water additive used to control microbes

<b>PWS ID#: 220004</b>		<b>TEST RESULTS</b>							
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination	
<b>Inorganic Contaminants</b>									
10. Barium	N	2018*	.0189	.0188- .0189	ppm	2	2		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2018*	2.3	2.1 – 2.3	ppb	100	100		Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2017/19*	.1	0	ppm	1.3	AL=1.3		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
15. Cyanide	N	2021	26	No Range	ppb	200	200		Discharge from steel/metal factories; discharge from plastic and fertilizer factories
16. Fluoride	N	2018*	.233	.231 – 2.33	ppm	4	4		Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2017/19*	6	0	ppb	0	AL=15		Corrosion of household plumbing systems, erosion of natural deposits
Sodium	N	2019*	79000	51000 - 79000	PPB	0	0		Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.
<b>Disinfection By-Products</b>									
81. HAA5	N	2021	5	No Range	ppb	0	60		By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2021	13.9	No Range	ppb	0	80		By-product of drinking water chlorination.
Chlorine	N	2021	1.3	.7 – 1.8	ppm	0	MDRL = 4		Water additive used to control microbes

PWS ID#: 220005									TEST RESULTS								
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination									
<b>Inorganic Contaminants</b>																	
10. Barium	N	2018*	.0314	.0299 - .0314	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits									
14. Copper	N	2017/19*	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives									
17. Lead	N	2017/19*	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits									
Sodium	N	2021	6.76	6.52 – 6.76	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.									
<b>Disinfection By-Products</b>																	
81. HAA5	N	2021	4.38	No Range	ppb	0	60	By-Product of drinking water disinfection.									
82. TTHM [Total trihalomethanes]	N	2021	2.48	No Range	ppb	0	80	By-product of drinking water chlorination.									
Chlorine	N	2021	1.3	.9 – 1.7	ppm	0	MDRL = 4	Water additive used to control microbes									

PWS ID#: 220007									TEST RESULTS								
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination									
<b>Inorganic Contaminants</b>																	
10. Barium	N	2018*	.0323	.0137 - .0323	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits									
13. Chromium	N	2018*	.7	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits									
14. Copper	N	2017/19*	.1	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives									
16. Fluoride	N	2018*	.1.16	.858 – 1.16	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories									
17. Lead	N	2017/19*	2	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits									
Sodium	N	2019*	140000	98000 - 140000	PPB	0	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.									
<b>Disinfection By-Products</b>																	
81. HAA5	N	2021	13.4	No Range	ppb	0	60	By-Product of drinking water disinfection.									
82. TTHM [Total trihalomethanes]	N	2021	15.4	No Range	ppb	0	80	By-product of drinking water chlorination.									
Chlorine	N	2021	1.4	.6– 1.8	ppm	0	MDRL = 4	Water additive used to control microbes									

PWS ID#: 220036									TEST RESULTS								
Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure -ment	MCLG	MCL	Likely Source of Contamination									

<b>Inorganic Contaminants</b>								
10. Barium	N	2018*	.0204	.0196 - .0204	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2018*	2.9	No Range	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2017/19*	.8	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2018*	1.39	1.37 – 1.39	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2017/19*	2	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	N	2019*	140000	No Range	PPB	0	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.

<b>Disinfection By-Products</b>								
81. HAA5	N	2021	7.88	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2021	24.8	16.2 – 24.8	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2021	1.4	.8– 1.8	ppm	0	MDRL = 4	Water additive used to control microbes

**PWS ID#: 220062 TEST RESULTS**

Contaminant	Violation Y/N	Date Collected	Level Detected	Range of Detects or # of Samples Exceeding MCL/ACL	Unit Measure-ment	MCLG	MCL	Likely Source of Contamination
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<b>Inorganic Contaminants</b>								
10. Barium	N	2018*	.0106	.0102 - .0106	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
13. Chromium	N	2018*	1	.6 – 1	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
14. Copper	N	2019/21	.3	0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
16. Fluoride	N	2018*	.134	.133 - .134	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
17. Lead	N	2019/21	1	0	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium	N	2021	73.4	72.8 – 73.4	ppm	20	0	Road Salt, Water Treatment Chemicals, Water Softeners and Sewage Effluents.

<b>Volatile Organic Contaminants</b>								
76. Xylenes	N	2021	.0023	No Range	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories

<b>Disinfection By-Products</b>								
81. HAA5	N	2017*	5	No Range	ppb	0	60	By-Product of drinking water disinfection.
82. TTHM [Total trihalomethanes]	N	2021	1.94	1.1 – 1.94	ppb	0	80	By-product of drinking water chlorination.
Chlorine	N	2021	1.5	.8 – 1.9	ppm	0	MDRL = 4	Water additive used to control microbes

*\* Most recent sample. No sample required for 2021.*

*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.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected however the EPA has determined that your water IS SAFE at these levels.

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. During October 2021 on System # 220003, we had one sample that tested positive for total coliform. The resamples were clear and showed our water meets drinking water standards.

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 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. 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.

To comply with the "Regulation Governing Fluoridation of Community Water Supplies", our systems are 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 as follows. The percentage of fluoride samples collected in the previous calendar year that was within the optimal range of 0.6-1.2 ppm was as follows.

System #	# of Months	Percentage
220003	8	65%
220004	3	25%
220005	6	54%
220007	6	46%
220036	3	27%
220062	3	46%

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 Grenada 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.